

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING

ERROR REPORT

EFS

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/659,755A
Source: IFW16
Date Processed by STIC: 1/17/07

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06



IFW16

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set : N:\CRF4\01172007\J659755A.raw

3 <110> APPLICANT: DIXON, RICHARD A.
 4 LIU, CHANG-JUN
 5 DEAVOURS, BETTINA
 7 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR PRODUCTION OF FLAVONOID
 8 AND ISOFLAVONOID NUTRACEUTICALS
 10 <130> FILE REFERENCE: NBLE:007US
 12 <140> CURRENT APPLICATION NUMBER: 10/659,755A
 13 <141> CURRENT FILING DATE: 2003-09-10
 15 <150> PRIOR APPLICATION NUMBER: 60/409,447
 16 <151> PRIOR FILING DATE: 2002-09-10
 18 <160> NUMBER OF SEQ ID NOS: 15
 20 <170> SOFTWARE: PatentIn Ver. 2.1

ERRORED SEQUENCES

922 <210> SEQ ID NO: 15
 923 <211> LENGTH: 105840
 924 <212> TYPE: DNA
 925 <213> ORGANISM: Oryza sativa
 927 <400> SEQUENCE: 15

Does Not Comply
Corrected Diskette Needed

group of 9 nucleotides

```

E--> 922 aattccata tgcggtacgt cctctttggt gtacgattat tatacgtggt ttatttttga
E--> 930 acgaacatta tacgtgtttt tgaagtgtac gcggttaac aaaagaaaag cttcatggtg
E--> 931 atttcgtaac atgtcaatgg gaacaaaatt gctaatacaa attaaagcca tatattaagt
E--> 932 ttctacaaaa aaaaaacgaa ataagttgct aattgagcat ctgattatat gtctgatact
E--> 933 taccgaaaac gaacaatgct acagaataaa ttaaatgcaa ctcaagctac cttatatata
E--> 934 tagaagttaa gaatatgaga atcccaatta taccgcggtg agagcttgag catcgtcacg
E--> 935 aaaccggcaa acattcttct gcaagtagca gatgacgtac gtacgtgttt gattcttagc
E--> 936 cttagttcgt tagaatatgc tgcacttgca agctacacta gctactacce ttttcctttt
E--> 937 tattcttctt tttcgaaaaa aagggaatca agtcgttaat cttoctcact ttcattctcat
E--> 938 ccttttctaac aattcaaaca gatcatacta tcatgtctta atgtatagga gcgaatttta
E--> 939 gattaggtta tttgcaggac taagttccct atttcaatat atattcgggt cgatgcagag
E--> 940 accgggtaaa aaaaataccc ttctctaaaa aaatcatgc tcgaatgcat gcatgttaat
E--> 941 caaaatatac tgagattggg atggatttat atatgtatga tgatggagtt ggaaggggtt
E--> 942 aatttgattt ttacgtacgg gtgaaggaag tgctcgaaga gccaggcacg gaggatggag
E--> 943 acggcgcgct cggggaggcc gcgctggggg cgccatgggt ggctctcgag catgccggcc
E--> 944 tggtaggcct tgtgctggcg gaggcactgg tcgagcacc ggaggcgggg cgtctcgccc
E--> 945 ttggtcatcc cgggcaccgc cgtgtccttc tccccgagct gcttcgcgac cgcctgcagc
E--> 946 tgcgccacca ccccgccct caggctccgg aagtgcctcg agatcgctct cgacgccagc
E--> 947 cgcgtgtacg acgcgcgcgc cctctccccg gccaccgcct cgaacgacgc cgcgagcgcc
E--> 948 ctcatctgct cgcagtacct cctgtacctc ctatccacct gcataataat aattaagcaa
E--> 949 gagtaatttc agcaactaat taatcgagat gattacaatg gaaatatttg atgacactgt
E--> 950 gtagcttagt aggtgtagct ctacttgctt gtactactgc ccggaattct gcaacgacca
  
```

6059

120
180
240
300
360
420
480
540
600
660
720
780
840
900
960
1020
1080
1140
1200
1260
1320

numbering
off,
due
to
above
error

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 951 agctgcacct acctgtgaac tccactgtac tgatgagcag tgtaatcaca agaatggcaa 1380
E--> 952 gcaataagca gtgagtaaata gtctgaggaa ttaattgaga gatcctgggtg gaggcaggag 1440
E--> 953 caggggatgg gcatgcatgc caagtccaaa gggattgaga gctaggaggc ctagcagtag 1500
E--> 954 gctgcataga tctacagtag gctgcataga tgcagagcta gctagctaag ctgcaacctt 1560
E--> 955 actactacac ctacagtgcc atggccatgc ttggagagaa aaggagagga gagagagaga 1620
E--> 956 attccctata gagataccta gctacagggtg tagctaaggc aaaggaatgg aggtttccaa 1680
E--> 957 aagcgaatgg tgaggaccaa gaagggaatc ccctccctgt gcttgtccca ggaacctcc 1740
E--> 958 ttgggcaagc cataattgaa ctgccacttg cctgcagctt tttagatttc caaggagaga 1800
E--> 959 cactctctca tgctagcttt gcttaaatta ggcctccttg ccatggtggt gtgtgtggtt 1860
E--> 960 aattagctaa gcttgagaag ctctcacctc ttgcagcatg gtgtagagct tgcccttgag 1920
E--> 961 ccgctgcagc tcggccgcgt ccatggactg gatctgcgtc ggcgcgggtc acgacgacga 1980
E--> 962 gcctccgccc ctggcggcct cttcttgccg cggtttggtt gccttgcttg ccgatgatgg 2040
E--> 963 gctgggtggtg ctcttcacgg ggagctgcga gaactcctgc aggagctgct gcgtcgggag 2100
E--> 964 gaggaacctt gagccgcgga gatgccacgc accctgctgc agctgccacg tcgacgccgc 2160
E--> 965 gcccgcgggc ggcgacggct ggtggtggag gtgctgctgc tgctgctgca tcagcagcga 2220
E--> 966 cgtcgcgggc gcctccggcc tgtggagcga gagggacagc ggcgcctggc tctgccggtg 2280
E--> 967 ttggtggtgg tgcagctcgc cgagcccgcc gaagtggacc gtcggcagcg tcgtcgcgcc 2340
E--> 968 tccatcatcg acgcccgcgc cgccgacgac gagegcgccc acaccttgct tctgctcgtg 2400
E--> 969 cgcgtgcgct gccggcatga gccccctcac cccgaacatc tccgccaccc caacccctg 2460
E--> 970 ctgatgctgc tgcaacccat acaactccgt ggcgcgggtg ccatccacct ccgcccgcga 2520
E--> 971 gtaatccgcg taccctaggc tcggatcgtg cgccatggat atcgatcaaa tcacgcacga 2580
E--> 972 ccacctcgag ccgtggcacg cgagagctca ctctccctcg atctgtggcg gtgcggggat 2640
E--> 973 tggtgaaaag gcgaaaagct gagagcaaca aaagtggagg aaagcaagag aaggctcgagg 2700
E--> 974 tggaggagag gagagatgag ctatagctaa gcctaggaag ggaagcgcac cgagaggaaa 2760
E--> 975 gggagagaaa ataaagggga gaagcaaac ttaggtagat agatggatgg atagcccggg 2820
E--> 976 gaaggagac gcacgcaacg gcagtgcac tttgcgcaaa ggagaggggg agctagggtg 2880
E--> 977 agcaggacca tatctttttt gggaggagag agagttggga gatatgggaa tatgtgaccg 2940
E--> 978 agctactctg atcctgtttc aaaatataca aacctaatat tatcaagaat ctgaattggt 3000
E--> 979 ttgggatgca tcataattcta ctctatgata gaggaagtag cttgtatgta ccgctcatat 3060
E--> 980 attctgctgg ttgctggtgt gtgagacgag atcacgttta gttagtcttc gtttacacac 3120
E--> 981 ggggagacac ataacacggg taggatcatg atcctcaact tttaaagtca catgattttg 3180
E--> 982 tcattgatata ataggcccgat tgagccctag actcatatat aagtgataag ggtataaaga 3240
E--> 983 tttcgaagat ggaggatctc aatctgacat aggtagggtt ttgatttaca ttttgcaatg 3300
E--> 984 aagagaaatg aagggaacaa aatccaaaat ttaggatgtt ctgagccaaa cttaatttaa 3360
E--> 985 cacaaaacca atttcaaaat ttgcacattt tttccatgaa tagatcaatt gatggctaaa 3420
E--> 986 cgcaaaatct cctccgggaa catttcgggg cctcacccgc atacatgatg tgtgctagat 3480
E--> 987 atatgagaaa aaaatacata cgggtattaca gtaagtgtat ttttttttat cattcgacag 3540
E--> 988 gatgccaaaa caagtgggta ttatatctcc agggattaaa agagtctctc cgtacacgct 3600
E--> 989 caggcacata caaaacgaag cacatatcga gagagagaga agaacaacaa aattaatgag 3660
E--> 990 caactcgcaa ccagtcgacg gatcgatcgg ttggggggcg tggttgccgg gtaagcttcc 3720
E--> 991 gatcgatcgc gcgctatagc tgcaggatag cggcttcacc cggcctgccg ctactcttgc 3780
E--> 992 accgttgcac tgtagctata cgttgcattg catgcactgt cctgtgctgt tgtgcacacc 3840
E--> 993 acacatgtac gtacagtgtg cctgtggatt tatttttatt tattttatta ttgctgatgt 3900
E--> 994 cttctttttt ttcttatggg ataatacaga gagccagatg tagcttcaat ctctcgctcg 3960
E--> 995 agaaagtggg tgcatgcatg gatgtgtcat gtgtattttg caggctcgcc ttttcgctta 4020
E--> 996 tgttttatgtt tatcagaaaa aaatataaat tttcaatctt aaatttgagg ttgattttga 4080
E--> 997 agttttttca tcaaaattta tttttttgtc tttgcttttt aaaccgttaa gaacacatat 4140
E--> 998 ataaaaatttt tattcacaaa ttatttttta tttacaaata tatcgtttgg tttatttctt 4200
E--> 999 agataagcga aacgataggg accttgggtc aaaggagctg agctctcacg agctcataca 4260

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1000 cagtgtgaag tgtgagacaa taatttttcta cacctaaata atggtatgcg tcattaattt 4320
E--> 1001 acaagctact taaatagtta tgaacttttt tagaaaaaca ataataattaa ttgcgatgat 4380
E--> 1002 ataagtttat aaaatatgac aatatttgat ctataattaa aaaaaagaat ttatggcagt 4440
E--> 1003 gaatagtacg gccgtgtgcc tgtgtgcagt gtacatgaca tgcttggtgt gtgcttgaac 4500
E--> 1004 gcaaaaaaaaa gcagaggaga gagtgagcga ggtagtggtc caaggctacc aaccaatgac 4560
E--> 1005 aattttgtaga gcggcctatt ggaaaacagg gtgaacggtg gggaccacac gtgggccccca 4620
E--> 1006 caggaggggcg tgtgggacca cctacgtcac aatcgtgcat ctttcttttt ttttaatttt 4680
E--> 1007 attttctcct tcttctcatt tttaattact agtagtccga tgatgaaatg tataatttgc 4740
E--> 1008 atatattctt aggagtattt ttctgccact cgtgcgaacc aaccagagta aaagattggt 4800
E--> 1009 gtggagtggg ctagtagtct agtgatggaa ttcacgggtc acgttctacg cacgtgtttt 4860
E--> 1010 catatcgagg gccgtcgatc gtttggtatt caggatattt tggacgaaaa tcatgcgaaa 4920
E--> 1011 tgatgatgcg ttgcaatcaa atgagaggca aaaaaaaaaa ggcttggtcg tttgcgtcat 4980
E--> 1012 agcctgctca aacaattcct cgcgtaaagt acagttcata cttcttgata ctgtatttga 5040
E--> 1013 ttaccgcgtc attcctctta actaaatttc cccatcaacg ctgaggaaca tgcattggcct 5100
E--> 1014 aatatagtag gggatgatat atgagctaaa gtaatttaca agttataacc atttaaaatg 5160
E--> 1015 atcagaatta taaagagaaa acactcactt ttgtatcaat atataggata ggggagaagg 5220
E--> 1016 tgtaaaccta aatagggaag aaaccggatc gggtatggtt ggatcatggc attccgcata 5280
E--> 1017 ttcttaccta tatttttctt tgaatccaga acagggtacg gatagtggca gatataaac 5340
E--> 1018 atatcactta ggagtatctt gtatcctatc caatattttt ttccctagaa tcagaagcgg 5400
E--> 1019 aaaatgatata ttatctgcag ttcataggta ttaaaccctag ggagacaatt acagtgttta 5460
E--> 1020 aaaagatata tcaaaagaaa aggtgtgcaa tatcactgtt tcatcatggt tcattacaag 5520
E--> 1021 cttaattaat aaaaaattcc aatcatgctc ctgacagttt ttcaatgcct tgggtgttct 5580
E--> 1022 tgaattttgc tcatccctta tgtacagttt tccctctgac ctctatatat tctatttctt 5640
E--> 1023 tagttgaccg ttagaatttg tcaggactat atcacctctt ttagatattt aagattataa 5700
E--> 1024 gaaacagctg gtgtgtacta tgtagtcagc tgataaaaaat ctagaaaagt tatatttctt 5760
E--> 1025 agcttatgtg ttttattttt ctttctggtt tatataatta tagtttctta agattgaatg 5820
E--> 1026 agaatatgca tggattatgc atggattatt tgaagagtta aaagatactt agaagaagtt 5880
E--> 1027 gcaactacta tgagctctcc aaacacgata aaaccactt aactagaaag ctgctctgaa 5940
E--> 1028 tcaaagaaaa aggattagtg ggacaaagaa gcacttgatg tgcttgcatg catctttaac 6000
E--> 1029 aactgcgacg gatgcaata attaacattt tgagaaaacc aaccaatac agcataattt 6060
E--> 1030 ttttaataata tatgggtcga caatgatgtc gaatatatat ttttcaatat gtctacacgc 6120
E--> 1031 gcgcgccagg aaatgaccct atcagtcctc gtcaacacat ataaacttgt ctttgaagtc 6180
E--> 1032 tcaatttctt tcaattttaa actctgcaga aaattcaatg taaacaaaac ggatcggtct 6240
E--> 1033 aaaattttta aaagtgtctc agtggggctc actccatatt taggttaatg cagttatata 6300
E--> 1034 ctccgggttg tacatgtccc tttctccaaa gtttcccggtt tcatttttta atcaccaaat 6360
E--> 1035 ctgatcattc cccctaacc ctttctcaat cctatcatgc atataattat atttttacat 6420
E--> 1036 ggcatacaat acaatatttg tcattgaact tgagatagct agcatcaccg attcttctta 6480
E--> 1037 ccagattcca agtatcaatg cacgcattgc gcacacttgc cactagccag aggaacagaa 6540
E--> 1038 ttagtactac taattaacag tggacttgaa ttttgcatga aaaaattggt ttaacccccg 6600
E--> 1039 aaataaaaata tcctaattga cgtggtgatc cagataagac aaatttttagt aggttgctat 6660
E--> 1040 tttggaactt cgtagtacta tctgttaatt agtttaaggg caattacatg gtttaattaac 6720
E--> 1041 tagttgcatt tgcataccca tgcatgagct gcgctgacgt aagctgggaa actgcatgta 6780
E--> 1042 gtacatttcc aatgtctatg aaatgtgggt cctggtatat attagtcatc tcagtggggc 6840
E--> 1043 ccacaatcgt ttgcttggtc acacacttca tgttgctagt taaggtaagt cactgatctg 6900
E--> 1044 tttgacctca cagaaaacca aagctcacga tcgaaaaccg aagatattaa taataacata 6960
E--> 1045 agtttggaaat gatagggaaa atcgctattg acttgagaaa cacagtgtaa atgcaaatgt 7020
E--> 1046 ttacaacgcg cacacattta tttgtatgaa caccgttaca ttttacaacg cacatgtaca 7080
E--> 1047 attttgatta tatacatgtt tgtgtattac aaaaggcaca attatgaaat tcaagtttca 7140
E--> 1048 catcgaattt atgttctctg cgcatttacc tatccctaga gtgggttatat tttctatttg 7200

```

numbers
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1049 gtccatgac accccacata aagcaatggg tttacttaaa acaacatact acctccgtct 7260
E--> 1050 tttaatgtgc gacatcatta acttttaaca tacgtttaat cttattcaaa gttttatgca 7320
E--> 1051 cacataaaaa atgagtcac attctcaaat aacttttaat aataaatcaa gtcaccacaa 7380
E--> 1052 aacaaataat aattaattat ataaatattt ttttaataaga tgaatgatca aatatctctt 7440
E--> 1053 aaaaagtcaa atgcgttata tatttaaaaa gagaagagaa taataaatac tccatccata 7500
E--> 1054 ctaaaatata aaggattttg atcggatatg atatatgtg gtattatgaa tctggacata 7560
E--> 1055 cttctgtcca gattagtagt actagaatgt gtctcatccg aataattttt tttatatattt 7620
E--> 1056 aggacggaag gagtagtatg tcatcttgcg cttaaaataa aactgtctcg cttgttgcta 7680
E--> 1057 gaatagactg caggcaggga cagggatgga gaagtagcag agtacatttc tgtcatccaa 7740
E--> 1058 acagaagttg ttagagatag gtacatatat gtagtaccag gggatattta catcttgctt 7800
E--> 1059 ggatctccca cctcaagaga gagagagaga agaattcttt gtgagccttt gatgatccaa 7860
E--> 1060 aagagcatct tgggaagttt gtacatgcag atgcatatgt gtgcacgcac ttgtgagact 7920
E--> 1061 tgcaagtcag tctggtcttt caagctagcc aagtcacagt actagtcac ttcacaaatt 7980
E--> 1062 gaaaattcgt ccatgtctag aaagggtgtg gttggaatcg gatcacgacg gatactatta 8040
E--> 1063 tgtgtaggta gtaaacatga cttggaagtc agagaaaata aacaaacatt tatagatcga 8100
E--> 1064 tcagagaaga tgatggatcg atcacacagt gccactacgc tggaccact caccattgac 8160
E--> 1065 gggcccatgt catcaccttt gatgaattta gccctcgtca gagattagtg gtcactgatg 8220
E--> 1066 actgcacctc acatctgacg ggtgaaaagc cgtcagtggg gattaacacc tttgacgggc 8280
E--> 1067 cgcatagaaa tagcccgta cagggtgagaa tcaactgtaa cgggtgactc tttccagccc 8340
E--> 1068 gtcaaagggtg acatacacct ctgacaggtc taatttatca cccgtcacag gtgtgaaaaa 8400
E--> 1069 tcatcaaaaa aaaattcaaa agtctcagc cccagccac cagctccag ctcacgacat 8460
E--> 1070 gaagcaaaag atgcaagatt catctcaaga tgcaagacaa caactttgca tttcattggc 8520
E--> 1071 atatctgata acatcagaga aacaatatag atcacacaac ttgagtaaca atatacatca 8580
E--> 1072 cagtagtaat gatctgcac ttaacaaact agacatccac acaacaaca cagaatatgg 8640
E--> 1073 cccaatctaa aatttgcaa tgaacatttg caagataaga aaaatcaagc acaacctaca 8700
E--> 1074 agagtcagaa atggcggtgg cgctcgtggg tgaaggagac ggtggaggac gccgatggc 8760
E--> 1075 ggggggagag ggcgtggaca ccggcggttg ggggatggag gctgcggtag ccgatccac 8820
E--> 1076 gtaccagaac ccgctggagg ccggatccag cggcggtgtg tgggtgggcg ttggaaggcg 8880
E--> 1077 acgcgggcag atccagaggt tgtggcgta gaagctgggt gcgcgctcga tggaggcggt 8940
E--> 1078 cgcttgctcg tctcatcgca gccgcgctca aaatcgctcg cgctggtgtc gcagctaccg 9000
E--> 1079 ccgcatggc cgctcgctcc tgcccgctca agccaccgc cgccgcttcc gagggcgagg 9060
E--> 1080 acgggcagat ctgctgccgc ccgagccgcc gccgcctccc ctcccgcgg atctggcgga 9120
E--> 1081 ggggaggggc ccaccgcctc ccttccctca gtcgggcctc cagatctggc ggagggaagg 9180
E--> 1082 cgctcccacc atccacgcg ttgcacctcc acgcgctcg ccgccaccac gcctcccttc 9240
E--> 1083 ccgcgcctcc cctctgcgcc ctgcccggatc tgacgagatg gcgcgcgcgc cctgccaag 9300
E--> 1084 ccggcgccgg tgccgctgct acacgcagag aaatggagaa agggagagag aactcgagag 9360
E--> 1085 aaatggagaa agagagagag aaaacaacct tatctcttct gagtgtgggc ccagccagga 9420
E--> 1086 gaagaaatat ctctccggc tcggcttggg aaggtaggtg acagcttcga gtatatatag 9480
E--> 1087 tgggacaact cacctcaaac ggtttagggg ttgaacctcg ttgtaaacgg tttgagggtga 9540
E--> 1088 gtaaacctca cctctgacgg gccatccggt tgcaactcgt cacaggtaac tagtcacctg 9600
E--> 1089 tgacgggccc gaagtagaaa ccgtcagagg tgaggattaa ctacctttg acgggttccg 9660
E--> 1090 ttttcgacct gtcacagggt actagttacc tgtgacgggt cgtagctgaa tagctcaccg 9720
E--> 1091 atgacggaat cttttagaac ccgtcaaagg tgaccatcat cactgactac cacttatgtc 9780
E--> 1092 cgtcacagat atgtcgtcac aagtatgagg atctggtgta gtgtgccata ttaggcgaag 9840
E--> 1093 catgccaatc aatcagttga tgttccccat ctgctttaat tagttaagga taatatcttt 9900
E--> 1094 ttcttttctt tctatttctg attctctgat cagttccaga aaaagaagct ccagagttat 9960
E--> 1095 ggctatctgt tctgcagat ctgtatatga agttaggtg cgttccaagt tgccgtgctg 10020
E--> 1096 ttcatatata aacatcatcc ccatccaaca aatgatgat gatgcgcctt aatctcacat 10080
E--> 1097 atatatgacc gttgcatgca tgcagatatg atgtagctag acgactacag tactgcacgt 10140

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1098 acggatcatc gtcgtcgtcg tctctgcttt gattgatcga tgaattattg cttgctcctt 10200
E--> 1099 gctggtaatt aatctgtttg cttccgtcag aagcagagaa agaaatggag aggaattaac 10260
E--> 1100 cacggagtag tgtgtctacg tcgatcgatt taccaccgca gatcgagcaa agagacgac 10320
E--> 1101 gaatcgaaga cgattccaca gtcgatcgcg tagctagcta agctctgcag ccgtcggcac 10380
E--> 1102 caaagactat tccgccatta ctgcctttcc gagattttta gccccatcgc catggggcct 10440
E--> 1103 acgaatggaa cagccagggt gatggagatg gatgcagata gagtcatgca gcagctatag 10500
E--> 1104 ctagcactag tcgtcgatca gctataccgg ttttatctag ctagatttgc taaaagaaga 10560
E--> 1105 atatataata tcctcgatcc acagctaaat acattgagac atgagacact tactaaacgc 10620
E--> 1106 atcattatcg tcccaagaaa tgacagtaac gcacatataa tttcgattca ttattgctag 10680
E--> 1107 ctaggtggag acgtacgtag actctcactc gagtacttga cctgtagctg ctaggtcgct 10740
E--> 1108 gctactgctc ctctctccgt gtctcttgga ggaggaagag gaagaagaag gaagctagca 10800
E--> 1109 gccggagctg tgcttttcca ccgtgcgatg ccgttcttgt cagtcgcttt tgccgagagt 10860
E--> 1110 actgctgtag tccgccctac gtacatacga caagtcactc catcgttttc tcgttggttt 10920
E--> 1111 atcggagtaac caaagttcaa aattttaaacc ctttttttat tatttttaggt tgcattttgg 10980
E--> 1112 gttttaattt ctatcgttgt caatttttgt acatttagct attactcttt tctatataaa 11040
E--> 1113 ataaattaaa acctgaacac tacatccacg tagcggatat acacaacca caaaatacag 11100
E--> 1114 tatttgataa gataatacgc accacaaaaa atatttagat tcaaaaccgc cgcttaaaag 11160
E--> 1115 aacgagaatg ctaggggacg ggatactgtc cccaacagg atactcctct accacaatac 11220
E--> 1116 gattcttata catacacgca ctaggcctac tctctgcgcg ccgtcgcctg ccccccacgc 11280
E--> 1117 cgccgtgccc gttccccgtc gccactgcgc cgcccatccc ccaccgcgcg cgtcccgta 11340
E--> 1118 ctgtcccctg ccgccgcctg cgccgtcctc gtctacaggg gacagctgca gggggcgacc 11400
E--> 1119 gcgcgtgtcg ggatgtcctt cccaaacagg atgccgggtt atatctaata ggaatcacct 11460
E--> 1120 gatacctggg aggtatcatc cgatacctca caagtatcac gcgatacatg gtagaaatcg 11520
E--> 1121 tctgatacct gataagtatc atatgatacc tggcgatatc acgcgatacg tggtagaaat 11580
E--> 1122 cgctgataca tgacaggatg tgcatgatac ctctgagta tcacgcgata cgtgggtgaa 11640
E--> 1123 atcatctgat actgtaacgc tccgcttttc gtgagacgtt aaaaactaat tcgccaaaat 11700
E--> 1124 cctatatgcg aaaatttctg tatttggtgt agagtctaag ttgtgccaa atctcaattc 11760
E--> 1125 aaatctccat tgttgttctc tcccgctgcg atcaaaatcc tccacctcta aaatgtcaat 11820
E--> 1126 cccgattcat ctccaaagt caaacatcga aattcaatcc catccttgaa attccttgcc 11880
E--> 1127 aatatttctc tcgattccaa gaatatcaaa tcccaacctt gaatccctcc ctgtctatcg 11940
E--> 1128 atctatctac ctgttcatct atctatctac ctatctatcc atccatctat ctatctacaa 12000
E--> 1129 gtttatccat cggttcgtcc gtctatctaa caaccttga attcctgtcc caactccaag 12060
E--> 1130 gatgtaaata caaacatata ccagccttga gctttaacct ccaagattcc tcttttttcc 12120
E--> 1131 tctttctttg gaaacctccc caaataattc ttcgggtctc cagatacaaa accaattcga 12180
E--> 1132 aaatattgag ttttcaactt gatctccctt ccttgactcc accatattcc gatgagtcca 12240
E--> 1133 aatatcaagt tcaaaattca aatttcaaat ctcaatccct tcataatcaa tctctcggt 12300
E--> 1134 aaaagtctat tttgcctccc tctttgtcgt tgggcccatt ctctctccct cggcccatt 12360
E--> 1135 cccctcccag ccttctctc ccccccctc acgtgcgcca cagtgccctg ctcagccgag 12420
E--> 1136 cgagagagag gcagcgcctc tcttcttctt cgttctcttc tcgtctctct ctttctcacc 12480
E--> 1137 gctccctgcc agcgttctgc cgattcaaac tgccaccgc ttcgctcgtt ccgcgcgcg 12540
E--> 1138 ctcccgtcgt ggtggccgac cgccctcgtt cgccgtcgc cctggcccgc ctgcgcctg 12600
E--> 1139 cagccgcccg tgcccactct gtcgtgcgcc catctctgcg ccgttggtgc cgtgcgtcca 12660
E--> 1140 agacgtggag gcaaggcctc ggctccccac tctcacatte cctcccacct cctctgctc 12720
E--> 1141 gccc aaaccg gcaagggacc gagctccttt cctccccct ttttgctttt tcccttccat 12780
E--> 1142 cgccaccgct acctcctctg cgcccgctgac caccgcgcag ctcgcccctt gaccgcctcg 12840
E--> 1143 tccaaggtcg gttctctccc caaacacct tccccgtgct ataaagccca agccgagctc 12900
E--> 1144 cctctcccat cccaatctct ctctgttctc tcatgcacac aaccgcgcca ttgtgcctt 12960
E--> 1145 tctctgctc tcgcccgtgc cgtcccgtgc caagcaccgg ggaggccggg gcgtgcgagg 13020
E--> 1146 acgcgtgacg cgggactccg ggcacctcc tcttctctt tccctggccc gagaacggag 13080

```

numbers
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1147 agctcgctcc cgcgcgctcg gccgctcgac accgcgccccg ttccggctcg gtagtgccctc 13140
E--> 1148 cctcccgttc ccttctctca ctgcacctct cctcccttag ctacgtggt agctcggcta 13200
E--> 1149 gccttcggt agttcgtaga agccgcccc aagccccgcg ctacctggca tggcctcgcc 13260
E--> 1150 gccattgccg ccgctcccg gaggttgccg tcattgccag cctccacgg tgcgctcca 13320
E--> 1151 ccccatccgg cgcgcgaaac ggggttcccc aactcccttg atgctccac cgccttgaat 13380
E--> 1152 cgacctctcg tctaccgcg ccgtttcccc tctttgctcg tcgccggcat gcgccaccgc 13440
E--> 1153 gattcgctcg cgcgggcctc cctccggtca atccgggccc gtgattccct cctcttgtc 13500
E--> 1154 cctcccatca ctccggtgtc ctccccctc cttgaatccc cgtgtgctgc cccggcgaat 13560
E--> 1155 gtcgcgcg cccgcgctc atctcgccct ccccttctt cctcctcccg cccggccgcg 13620
E--> 1156 tggctgcgac gaaggcacca cgtcggcacc agctcggccg gaccgggtca agctgacccc 13680
E--> 1157 ggtcagccgc tccctccgta ccccgctcgc gcgcgcggtc caccgcgagc catgaggctg 13740
E--> 1158 cagtggtgct cgtgcctcc tagtctcccg tgcaccgcgc cgtgcaccgc tccccctct 13800
E--> 1159 gaaccccggt gccgtcccg cgtgcgcctc cctcaccgtg aaccaggccg ccgcatgcg 13860
E--> 1160 ggccccacgt ggcacccgcg gaggtgaact tgggtccacc gactgctccc tctctccgc 13920
E--> 1161 gcgccccata tgggcgcgct cctcgcgccc gcgtcggccc attttgttcg gccgagccgc 13980
E--> 1162 aatagccttc aggcgcgccc ctaccgccc gaagggaagc taaatgacat cctcttttc 14040
E--> 1163 ttttcttttc caagggattt aataaatcct ttttcccta ttccataaat caattcctta 14100
E--> 1164 tttcaaaatt ccataagtca tttcccttga tctgcacgt aagtggtagt caataatatt 14160
E--> 1165 cttgagaata ttatttctat aaatttcata aatcaatttc ccttgttcc acaaatatct 14220
E--> 1166 tccttcgccc agaaattcca cttaaacttc caaaattcat atatctgat ccattcgctc 14280
E--> 1167 gatcgcctcc gttcaatttc cagtaattcc gtaaaattga gatctatggc actattaatt 14340
E--> 1168 agtctaaata ggggtctttct tttggtcttt tgggttaggt ttcgattgtt tgcgtatagt 14400
E--> 1169 cgcagttacc ggattttcgt cgatcgtgga tttctcgaag attcgtgaag cttagtgaag 14460
E--> 1170 accttgagca aggaaagtca ccttttgatc atcttgacc tataatttaa aactaagtat 14520
E--> 1171 ttcatcttcg caaatattgc atgaatagga tttacacaag taattcggcc gcggttgcg 14580
E--> 1172 agatagcctg cccgccccca attcctagtt gctgcaatta cctccttga attattgaac 14640
E--> 1173 acttaaacct cttttgtcag ctattgtgct tcgatgcag ggccctcagg caccgcgcatc 14700
E--> 1174 ggaacacctt cctcaaatt taaaatatcc aacgatgggt aaaacttggg gttttataaa 14760
E--> 1175 agacttggaa aaactcgaca cctgggtcgg tgtttgcgaa ctaaataaat tccaaaacc 14820
E--> 1176 gcagaccgga ggacgtaccg ggagtacggt ttccccgctc ttgcacttaa ggaccgtttc 14880
E--> 1177 cttggaattt tattcgaaca taaggcaagt gcgaccacat ggggtggaata ggacaccct 14940
E--> 1178 ggctgagtaa ttagctaata gggggagcca tgatgccaag agatatgtgg attcaacggg 15000
E--> 1179 atggtgcccg ggagaacccc cgggttctc ggcacagtat ggtctgggac ctaatctgat 15060
E--> 1180 gtcggtctgg gacccctctc gttggcatat ggtgttttaa taaaatcaat agcaaaaaca 15120
E--> 1181 acagtcttcc cttgaagcat gcattaaaca cttaattccc atggcttgct gagtacgaaa 15180
E--> 1182 gtactcacc ttactctctc tctctctctc tctctatata tatatatata tatatatata 15240
E--> 1183 tatatatata tatatatata tatatatata tatagtttct ctgccttgaa gagaagatga 15300
E--> 1184 agtgaagcga agattagggg ttcgctcctg tcccagccg tcgcctgtgg tgattggtgt 15360
E--> 1185 tagttcgtta gttctgctgc tgctgttgct gttggtgttt cctcgctccg gtcgctcggtt 15420
E--> 1186 gtattctcgg gctgtcctga gctgcaacct aagttaaggt aaataagtc tctatttaat 15480
E--> 1187 ttaaggattg caatgattca tatttgtcac cgtgggtacc agcgtatgt cctgggactg 15540
E--> 1188 gtactgtgat cgcggtttcg taggaagcga ttcgcgtcgt ttttccctac acacgctcct 15600
E--> 1189 atcaggtgcc gttgtacggc ggtgccagat tggggtgtga cagatacctg acaggtttca 15660
E--> 1190 catgatacct cgcgagtatc acgcgatacg tggtagaaat cgcaggttac ctgataagta 15720
E--> 1191 tcacatgata ctttcaagta tcacctaaaa cgtgtgtaga acggtctgat acctgatagt 15780
E--> 1192 tatcacatct gatacctact tgggatacat ctgtgtgat aattgtctga tacctaatag 15840
E--> 1193 gtatcacacc gtataactat ttgggatcat tccgttcgaa aacgggattc cgttatatag 15900
E--> 1194 cagcccccta aaaaaatcca ataattcaga tattaaagtt tcacgcaata cattttacat 15960
E--> 1195 ttttttatta tttttctatg acttatcagc catagctcta ccgatagcga gtgtgtgtga 16020

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1196 gagagagaga gcgcgcgcgt gctgccgaag tgacgggtcag ttggggacgtg cttgtcgatt 16080
E--> 1197 gaagggagag aggcggatgt accaacggtc gacgacgtac cggccggcgc tgccgccttc 16140
E--> 1198 gggtgcctcg tcgcgcctcg cgcgcgttgc cgatcgggag agagctcgca agttgcctgt 16200
E--> 1199 gcgcgcgtgt ggcgcccaag cgatcctaag cttggcaccg tacgtgcaac gaccgcgcgc 16260
E--> 1200 tccatgtcgg agagaatctt tgcctgcgag agagcgagct agcaagcggc tgttctcctg 16320
E--> 1201 ttcttatctg gcgtgggtcat gtacaagtct gtgtgtgtgc gtatggaccc atcaccacac 16380
E--> 1202 accccaacat cggtcgcatg attctcatgg caaaattggg gatcgacttg ggatcgatat 16440
E--> 1203 gggtagacgt gatgctcatg tgagtgggtg tggatgaagc tatactacta gctggtgacc 16500
E--> 1204 tgggtgtgtg gtgttgtctc tttttgtgta tggatcagtg gattgacacg actggcactc 16560
E--> 1205 gtggagaaag catggggcgg gcgagacgga cggcgaggtt tgtagtactt gggtgcaccg 16620
E--> 1206 tactatacgt ccgtacggtc ggtaattgc tgccatcggg tagttacgca catcggcata 16680
E--> 1207 ggtcgactat tttaggcctg tatatatgga gaggattaat tatgtcagct gcagttttct 16740
E--> 1208 ttttaagaga aaaaaatctt cagctctcta agcatgcaca ttgataagcc gtcaccgtca 16800
E--> 1209 ggagcactgg tgcaccggta gtaaaactaaa ttaaaaaatag gtgcaatact gttgatacac 16860
E--> 1210 tagcagtggtc taagatgtgg gtctggactc acacgtcaat atctgtatca gcagtattat 16920
E--> 1211 agacaattcc caccgattaa aaatagacat ccattttcag gtgatcaacg gagatgcac 16980
E--> 1212 cctgcagttg atctcgcgaa tgaaacggca tgcatacatc tcttgtaaac ttccagtggtc 17040
E--> 1213 aacagtactt gactttggtt gcatgcatgc gtgcagatgt gcagcagtg aaagatcccc 17100
E--> 1214 tgcagcgagc tcgatctggg gtgccacttg ctaacagtgc agattgcttg ccgacaggct 17160
E--> 1215 gatgctgtcc atttcagctc agtcaaaaca ctgttcgttt ttcgatcgtg gagtacatgc 17220
E--> 1216 atcatgtcat ctctgtttct tttcttggtt ggatgaaatg gcaacctcga gtcttctttc 17280
E--> 1217 cctttaattt ggtgccaaac tgccactggc cttttgtaca taatcctagc tggtttggtg 17340
E--> 1218 agctttggac cgccagggtt gtagcatttt cctcctttta gactgacata gtttatggat 17400
E--> 1219 aagactagcc gccgacgggt gtttatatac atctcgcacg ggacagggga tcagctagtg 17460
E--> 1220 tgtatatatc agttgttatt gtttattgac aaaaatcaga acagcatatc tagccgtgcg 17520
E--> 1221 tatatcacga aaatccttaa aatgcagcaa aatatataat tcctttatat cgagaaaagg 17580
E--> 1222 aaaacaaatt tgaaaacata attgatctaa aaggactatt tgtgctaagc tataataaag 17640
E--> 1223 ctctagtagt cgtactccat ctaagagaaa accaaccaga ttatagctct gggaccgaag 17700
E--> 1224 ctatagtata agcattttg agtttggttt ggctagattt atataataaa aaatcagtag 17760
E--> 1225 catttctaac acacaataag gttgtgtttg ctaggagact ccacaacttt tacctcttgt 17820
E--> 1226 ttttcgtgcg cgcacttttt aaactattaa ataatatatt tttaacaaaa atcctatata 17880
E--> 1227 aaagttaact taaaatcata taatctattt tttaaatttt ttagctaata cttaactaat 17940
E--> 1228 catttgttaa tcatatgctc tattttgcat gcaaggagcg agggctccca accctctaac 18000
E--> 1229 gaacgcctat gtgtgacctt aatataaata tataaactgt ttcacaaaat ataacgtagg 18060
E--> 1230 gagtaggtaa aactaactta tgaaatattg gtagtgtgca tttatttttt tgaaaaagtt 18120
E--> 1231 ctgtatagat aatgcttggt ctcaaattgc ggtacatcag aagtttaaat tgacatcaac 18180
E--> 1232 tcctaactaa aggaaataaa cgaattgaaa cttagtgggc ctaaaatagta ctggacacgc 18240
E--> 1233 aagggtccaa cagtaggctt gatataact actataggct tgggcccggc atcttaattt 18300
E--> 1234 aacgggtcga tctccaacat aaacttgagg attgaattaa agacgtatct caacaccgat 18360
E--> 1235 ttaaaaatga aattaaaatg catatctatc atttttttca aaagattatt atgtgtttga 18420
E--> 1236 gaattttatat tttgtgtcga aaatattgta cagttgggat agacatgcat aacagtgaag 18480
E--> 1237 tagatgtata caatatacta acactatatt ttatctaact acaaaatttt gacatgtaac 18540
E--> 1238 acaatcaate gttctaagtt ttagttttcta agaaagtaca tgcattttatt tacaattcc 18600
E--> 1239 gacgggcctt cgtaaacctt gaccattcat tatgggcccg aattggctat attggcccat 18660
E--> 1240 gctctgttga tatacacatc aggacgggca ggcagtgtga gagtccagac aacatcata 18720
E--> 1241 gacgtatgca ggtccgtttg gatatgaaac caactactac gctcttcgtt tcaaaatgta 18780
E--> 1242 ataatttaag agcctattcg gttcacagga tttttaaatc acaggaatag aaaaaatgta 18840
E--> 1243 gtaataatat aggaatgcac gtgcaaaaca atggattgga acacatgaat tttttctaca 18900
E--> 1244 ctgagctaaa caaaagaggt tggagtggat attttcattc ctatggaatt agtacatttt 18960

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1245 ggaggattgg catagtgttt ctacggaaaa tttttctttg aatcctacaa atcgaatgca 19020
E--> 1246 tgaacagtgc ttattctaga ggaattgaga ttttcttttag gagtccctga aaataaataa 19080
E--> 1247 agtccttaaaa agtttagatt tatagtatta aaatgtaccg tagaaatgta gtaaaagggt 19140
E--> 1248 tgtagagaa gcctgtggct gtggctgttc tatacatgca cgtcagcata aagtcagtgg 19200
E--> 1249 actataggct ccatccatgg ccacgtgca gtgaaacggg tgcaggattg gtgggtgtgt 19260
E--> 1250 acgtgtttgg aatgagctgt tccaacata tccacagtac acacggaaaa catagcggtc 19320
E--> 1251 tattagttag agattaatta agtattagtt attctttttt aaaaatggat caatatgatt 19380
E--> 1252 tttaagcaac ttttgtatag aatttttttt aaaaaaaac acatcgctta gcagtttgaa 19440
E--> 1253 aaatatatgc gcgtggaata agatggagag gagttggaac ccataattcc aaacacagcc 19500
E--> 1254 ggcaccgttg cagatttgat ccgacggtca aaatccacct ggagcccatc ggacggacca 19560
E--> 1255 gacacgcgat cagcagcagc actcgagaat cgccgtgaag cgtccgagac aagcttcctt 19620
E--> 1256 cactctctca caaattaact ccggcctcag cctcctccca ggctctcaac tcagctaccc 19680
E--> 1257 actccggcga gcatggcggc ggaggcagcg gcgcgcggag agggccacga cgacggctac 19740
E--> 1258 ttccccattc tcgaggtgcg tattctggat gaggcgtggc tgcgaggggg cttgtggtgg 19800
E--> 1259 aggaggggga tccgggggga gcaggggtta gccatggcga tggcgagca gccaggcaat 19860
E--> 1260 gtcaatgtgg ctgggttctt gcaggcttcg aggaggctga ggaatcgggt gatcatgat 19920
E--> 1261 ttgtggatgc gtatgcttct caggcagctg gtcgtgagat ggtggctgcg cgtgcatttc 19980
E--> 1262 aggcggttca tgtgggtgtg gcatctgcgg gttcttcggg ctcgggttcg tctgtttctt 20040
E--> 1263 tggaggattc ggcattgacca ccttgtctac atcttgaca ccatcatggt tttggcatac 20100
E--> 1264 gtctatttca agatcaatgc cagcttcata ggctacatcg aattcgtaa acttaattgc 20160
E--> 1265 tcatctggta aaattaattt agattttcat ttttgcttaa agagtactgg tgacattttt 20220
E--> 1266 tatccgattt attcatatat ttttttact atacgtttgc tatagcacia caccagtttc 20280
E--> 1267 tcatgggtgtt ccctctcgtc ttcattgtaa ccgtactcgg tgccctcatc tgcacagccg 20340
E--> 1268 tcagaacttt tatggacgct gtaattttct cgttaccgtt gcaggtttagc cattattttc 20400
E--> 1269 ttgttccacc ccaaactttt gaaacctgac aatggtagta tgataatcct attgtacat 20460
E--> 1270 tgaattcgtg ttattctatt gcatttaact ttttttttct gctgacttca tctgtgctt 20520
E--> 1271 gtacagcttc attggttggc gatgagtagt gagatcgctt tcaatttttag aagctctaat 20580
E--> 1272 gttcagttct gttgtggttg tatgattagc caagcagttt catgtcattt gaacagttgt 20640
E--> 1273 tgcttccact tcgattgttc tgccgtaaag agacttagtt tgccaactaa aattgtgcgc 20700
E--> 1274 aactcgacta attaatcatg catgtttgtg ccgttatata taggcttata gcctacagct 20760
E--> 1275 taatgattcg attcctagat caataccaac tgcagttaca gtgcattcat cttgttatag 20820
E--> 1276 ttacttagtt agctatatgg tcgttggtca ctgctatgtc aagttcatat ggcttaatta 20880
E--> 1277 attgtttcat ttctagctcc atgcccttta ccatcattgt gcattttgtt gatctcggtt 20940
E--> 1278 taccaccagt ttatgtgata taaaccaacc cttgcttaac tgatgtgctt atcttggtgt 21000
E--> 1279 tcatttgttc cagtgtcggc gtccgtgacg aacacggggc gatgtcaacc ggcttccta 21060
E--> 1280 gtgtttaatc cttcttcoga tcaggtttcg gtagtacaat acttgcttca tgatggcagc 21120
E--> 1281 cgcattcatt gtgatacctt ggctgttctg atatgctatg tattttgcaa caacccaaat 21180
E--> 1282 ggattgttat atgcagaaat tactcttaga aactaacccc caattggagt actagttggc 21240
E--> 1283 atggttttcta ttgatgatac tcctagagtc gtagtagtaa tctgaaatat atgtgactgc 21300
E--> 1284 tgcagctctt acctgttctg ctgcttggtt tttgaaggaa ggcaaaagct ttgccttgaa 21360
E--> 1285 tatattaata gagcaggaaa aaatatagcg agatatatac aggggttagat gaaaaaaaac 21420
E--> 1286 gaaacaaata acccgcaaga ggagaggcaa aaagcaggga ttaagtgata tcttccaaaa 21480
E--> 1287 ttccgaactc ttgcaggatt gaagcccctg ctttgacca tgctctccct tcctccttga 21540
E--> 1288 tctttgctag aattgaggat ggcgtagatg cattgttgcg gaagattcct gcgtttcttt 21600
E--> 1289 cgcaccagat tccccacgag attaaaatca ccagggtcct gagaggcttg catggggtgt 21660
E--> 1290 ttggagattc cgttacgagt gtccaccatt gctcgactga gtgacagctt tccgagttgt 21720
E--> 1291 ccatctgaag gtcagtccea gtccatctct gcatttctgc ccatatcctc tttgtgagtt 21780
E--> 1292 tgcattttggc caggagaagc agggccgatt catcaacatt ataacaaagt gggcaaatct 21840
E--> 1293 tttggttttg ccatcctctt ttttcagcc tgtctgccgt ccatactcta ttttgctgta 21900

```

*number
off*

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1294 ccagccaaga gaagaacttg cacttcggcg ggcgccatgc cttccagatt gactgataga 21960
E--> 1295 aggtagattt ggcagcccca aggaattgta gtcgataggc cgattttgcc gagtactgcc 22020
E--> 1296 catttgctgt gaggttccat cggatgctgt cgtgggtttc tcttagaggc ctcatatctc 22080
E--> 1297 tgatcattct ccagaggcgg atatactgtt ggaggtgatt cgcctcgaag atgcgagaga 22140
E--> 1298 catcaatata tcgtatccac ttgttttctg ctaaggcatt atgcacagtt ctattctttc 22200
E--> 1299 ttctagaggc cacgaaaata tctggggcaa tcaattgcgg tgtttgattg tctagccatt 22260
E--> 1300 ttgagcccca aaagcgtgca attttgccat ctcccaccgt tattgttggt gtggccgcga 22320
E--> 1301 agaggtattt gtctagctga ttgcatggta gcacagatcc cacccaaggc ttatccggcg 22380
E--> 1302 ccacccattc gttccaaagc catctgagcc tagcttagag ctgatgtgaa atattgcagg 22440
E--> 1303 ttcataacac ctaggccacc caaaactttt ggccctgcga cccttttcca gttgacttta 22500
E--> 1304 cattttccct ccgagatggt ttcgcccccc gcccaaagga attttcttct tattttgtcc 22560
E--> 1305 aactcctcta ggggtccgtc tggtagcttt agtgatgtta ggtggtagat gggctacgcc 22620
E--> 1306 gtgaggactg atttcgttag gcagattcta gcgacggtcg acatcatttt gccttgccaa 22680
E--> 1307 ggagcgagac gcgcttgcca cttgtccatt aagggtgtaa tgtggacctt cttgagcctt 22740
E--> 1308 ccaaccacga ggggtaggcc aaggattttc attgggaagt ttgttaggcc tgctgggaag 22800
E--> 1309 atcccaatga tgctggagag atcaatgcta tcacaccgga taggggcaat ttggcttttg 22860
E--> 1310 ttgaggtttg ttcggaggcc cgtcacttgc ccaaaatcgc ttagaaagct agtgagattt 22920
E--> 1311 gtcattgtct ggacacttgg gttcacgaat atggccgcac catctgcata gagggagggt 22980
E--> 1312 cggaaatctg gagctcttcc gcgaagaggg gacatgtgtc ctaattttgt tgctttctct 23040
E--> 1313 agaaggtggt ggagtgggtc gatggctaaa ataaatagca gcggcgagag ggggtcaccc 23100
E--> 1314 tgccggaggc ctcttccatg ctttataggc gatcctgggc atccattgag gaggacctt 23160
E--> 1315 gttgtcgacg aggttaggat gtttgagacc cagtttagtc accgagatgt gaagcctttt 23220
E--> 1316 ctctggaggga ggtcgattaa gtaatcccat ctaaccgaat caaaagcttt ggttatgtca 23280
E--> 1317 agcttcaaca gaagagtcgg cgttcttggt tgggtggaatt ttcttgtagc attcctcaca 23340
E--> 1318 tacataaagt tgtcatgtat gcatcttttc tttatgaaag cactctgggc gtgactaatc 23400
E--> 1319 aggatcccca tgtgaggctg caggcgcagt gcaagtacct ttgaaattag cttcccaact 23460
E--> 1320 ccgtgtatga gactgatagg cctgtagtct cctacgcatt ctgctccctc cttttttggg 23520
E--> 1321 atgagcacca cgtttgctga attgaggatc ggggaagttat tacttcgtag ccggtcgaag 23580
E--> 1322 gaatgaatga ctgccatgat gacatctttt atcgtttccc aacaggcttt atagaaagca 23640
E--> 1323 cttgtgaagc cgtccggacc gggcgctttg tcgctgggag actgtttaag tgtcgcgtga 23700
E--> 1324 acctcctctt ccgtgatggg gccgctaatt acggagcatt cgaaagttgg taactgcagg 23760
E--> 1325 gcgtcctagt cgagatcttt tgagcgtgga gctaggtgtg ccatgaaggt ctgaaagtgt 23820
E--> 1326 tataaagtgc tcttttataa cagtagcttt ttcacgtgtt tttactttcc acatgtttcc 23880
E--> 1327 cactcgtagc ctctgaatga agttttttct ctttcttgca ttcacctca aatgaaagaa 23940
E--> 1328 cttcgtattt gcatccccct ctttgagatt ggtgattcat gcagcttgte ttctacgggc 24000
E--> 1329 tctttccacc actgcaagac ccagcactct gtctttgagg ttctctctta gcgtgagttc 24060
E--> 1330 ggcttgagtg agttgccttg actcttgggc tataatcaaat tgaagaataa tctcgagcgc 24120
E--> 1331 catgtgtaaa tgaagcttcc cctgcgaaat caattttttg ctccacgata ttagtctttt 24180
E--> 1332 ggccatacat cccagtttgt gaaagagtct atggtgaggt tcatgatggg gttgggggtgc 24240
E--> 1333 tatccaggct tcttgtagca cctcgtggaa gcctgggagg tggatccaaa agttctcgaa 24300
E--> 1334 ccgaaaagtt ctcgatcgtg gggcctcccc ttgtccggtt agcattagcg gacagtggte 24360
E--> 1335 tgagagttag gtgataggg catgtaaaag atgtctctcg aatgctgtgt tccagctagc 24420
E--> 1336 gttgcaaaaa aaccgggtcca gtttgacgag ggttgggttg tcttgttcat tactccagg 24480
E--> 1337 gtatcgccta ttctgaagtg caacctcctt gagctcgcaa gcgttgaggg tttctttgaa 24540
E--> 1338 aattcgcatt tgtctgcgat taatgtttgc attgtttttg tcggaagcct tgtagattat 24600
E--> 1339 gttgaagtct ccgagacca gccattttga attgttcagat ggcttggtgt cccgtagtct 24660
E--> 1340 tctcaggaat gtttgcttgg cactctgttg acagaaaaca cgaggcctgg gagatctgct 24720
E--> 1341 taactccagt gcagggtcaa agctcgcctt caaatgtatg agcgtgccag ttgatttgat 24780
E--> 1342 catgtaatca acaagaaata gagacaaaga attcgtgggt aaatctataa atgatagccg 24840

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1343 atcgggctagg tgtcgaatgac atatcattta tctttgagct gatgtcatat atgaatcgat 24900
E--> 1344 cggcggttat aaatagatag taaggaaacta gatctattcg atcgactgta gatattaacg 24960
E--> 1345 atatatagtt cttatatataa taaatactta aatcaagtga ttgggataga tccgtcacca 25020
E--> 1346 tgccgagaca gcataaatca cttagatcga aatatatatt aataacagga ttatatatat 25080
E--> 1347 ttatagcata gccgatcaga tagatctagc atgtatcggc taatactccg atactacttt 25140
E--> 1348 atataaagat atcaaaaacaa atataatata ccaaaacaaa gcttaatatata cttaaagtca 25200
E--> 1349 ataagatcct gacataaagg gcggatttaa catgtcattg aagcatatag atcgaatatg 25260
E--> 1350 gttaaatacag ataagatcgg ctgaaactcc gatactaccc taatcggtaa ccagaggaca 25320
E--> 1351 ggctagagat tgatattcta agcacgactt aatagatcaa actcaactga tgcagcatta 25380
E--> 1352 agtatgaaaa gaagaacaat atctagacaa tcaagccgct ggggtgtttca taaagtggta 25440
E--> 1353 gatattcttat ataatttagg acaacgtcgc tatttaacct aatcgggttg cttctattaa 25500
E--> 1354 cagatgttag ccgattgtag gttagatgat gatattgcca aagattatgt aagatatatg 25560
E--> 1355 ataacttgac gaattatata gacaagatta tagtgtcata aagatggaag cactaatctc 25620
E--> 1356 gagaacataa gtctgcataa caagttttac ctctgttgta agatcgaaac cgatgcagct 25680
E--> 1357 caaaccgaaa gcaagaactc gtcgaagcaa aactaaagtg aaaagggtggc gatgcgcca 25740
E--> 1358 aattgtattg aacgtgtgtg ttaaaaatta catagggtc ggggtctatt tataaccgag 25800
E--> 1359 aattacaaga tatgtccata ccggacacga ccactatctc taacaaactc taagatacca 25860
E--> 1360 taagtctttg tggcagactt ttgcccacac atatctctaa ggaagttaca taaaacatcc 25920
E--> 1361 taattaatag aaacatccat gtgcggcaat catcttgaag cacctcaatt caacccaatg 25980
E--> 1362 tcatacacca aattatactg tcagaatcgg ctgcacggc tcacctagtc cgactcaaac 26040
E--> 1363 ccagccgatc ctaatcgtag ccgatctgga cttcagccaa ttcttgctct gttctcggat 26100
E--> 1364 taatctccgc cttcgactcc accttgatct aatctccttt tccaatgctg atattaccaa 26160
E--> 1365 atttggtcgt taacacactc tctctggtta gcccataaac agctgtaagt aggaagggtg 26220
E--> 1366 tctgacattc ttttaaggag actgtggccg aaagtgagaa tgttccttgc acaaagtctt 26280
E--> 1367 tgagctcggc aaaatcctca ttccagagga tcaggatgcc acctcttgtt cctagcggtc 26340
E--> 1368 ctgtcgtcgg cttgaagtga aaagatttta ggcgtccccc gccaaaggaa tgtaccagtc 26400
E--> 1369 tggcatcaat gttgtcatt tttgtttctt gaaggcaagc gatatggggt ttggcttctt 26460
E--> 1370 gaagagtctc tctcactgtc gctcttcttg ccggtctctt gaagcgatat ggacgttcca 26520
E--> 1371 ggagaggatg tcgatgatcg ggtatgtcat gtgtaacctg tattcctcgg ggaagggggg 26580
E--> 1372 gggctgggagt tgtgcacgaa gccgaggggt gacagccgtg tcgggtgctat caggctgaaa 26640
E--> 1373 ggtagtcggc ccaatctagt ggggcgatct ggctcatgga ccgagtccga gtccatttgc 26700
E--> 1374 gcgaagttca gtcgggggga gatgagccca ggcaggaaga catgttgggg gccccacatgc 26760
E--> 1375 aattgggccc gtttgagaag acgttgggct agaaagactt gggccgggga tgtatgatgc 26820
E--> 1376 tgtagggcga aactgatggg gatgacagcc gcgcgcgcca ccgcggcgct gtgcgtcgcc 26880
E--> 1377 ccacgttggtg cccgcgacag caccgttttt gtgtcacacc tggcatcgag ggcggtagga 26940
E--> 1378 ggggacgtgg gggcgaaaca gcaaccagc cgtcgacaat cgtagagagt gctatcgttg 27000
E--> 1379 gggcccttag aattgcgtcg tttgtgctgg ccgtcagtga ggcattgacg ccgtgggggt 27060
E--> 1380 ttgctggcgt cgtcgccgca attggctaac attatcgatg ttgtttgggt gcggagtgtg 27120
E--> 1381 ggcaccgaga agggataggt tgattcgcga agttgtcgtg aatagcggga gtagcaatgt 27180
E--> 1382 ctggcgggtg cgcgcgtcat aacggtagca cgcgtccgag tctcacgcag atacgaagga 27240
E--> 1383 agcaaatgaa atcgatacat ggagacagag gactccgttt gccagtgcgc gaagcacagc 27300
E--> 1384 ttgctcacgc cgcagcaatc tcctcctggc agccaatgtc agagaggccc aggtaattcg 27360
E--> 1385 ccagagccgg gtccaccgtc ttccgctctt ccttgtcaaa gccgaacagc tgcgtgaggg 27420
E--> 1386 cgtcgattgc gtcttgccgc agcggcgagt tgaacattgc tttgaagtcg gcgagtgcct 27480
E--> 1387 tgtcgggtgag gactccttcc gctggaaccg taccagggcg ccggcagaga ttgagtcgcg 27540
E--> 1388 cccgcaacga catcagtagg ccggccaccg gctctggggc tagccttgga ctctccgccc 27600
E--> 1389 gcccttcacc caacatgtca gcagccactg gaattgggaa gacctccagt gcatcatcgg 27660
E--> 1390 gggggatcag cacctgcgtg tctccggcga tgtcgaatcag cacctgcggc gtggagagga 27720
E--> 1391 ttgccgaggg aagttctttg aagaggacac gcggcggggt tacctgaacg gagtcgaaat 27780

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1392 cggcgatgtc aggcgtcggc gctgtctcgg tgtccttgac cggggacaag tcgttcgctg 27840
E--> 1393 caagcgtgtc ttgaagagtt ggtgccgcgg cgcactcagc gttcagggac ggcagcgtct 27900
E--> 1394 tttctgcgga cgtgatcggc agtagctccc ttgtagttga actgatcatc gccagcgtatg 27960
E--> 1395 ccaaggctat caccggcggc gatggtgccg cagcgttcgc ggcagggttg tcgagcgcca 28020
E--> 1396 ctggcgcgagc gagcttgctg agcgccaccg caacaccggc cgcaactagc atctgtcgca 28080
E--> 1397 gtgccccttc caccgaggct gccgcaacgg cctagttgat gcaggcgaaa acccgcgccg 28140
E--> 1398 ccgggatgga cgcagcggac cgggcttcat acccgctcc atcgtgtgga cgacgtgacg 28200
E--> 1399 ggagcagagg ccccttgctg aacggggggc atgtcagggt agcattccgt gccaaaggacg 28260
E--> 1400 atgccgcaac ggtcggagtg agagagtcgc cgtttccgcg atcattgtca ccgtcttctt 28320
E--> 1401 tatcaccgca gccagccaga tgaagccgtc cgtcgcgcgc ccccatgtcg ccacggtcac 28380
E--> 1402 gggcgcgcgg tgagcgcgtg cgttcgcgcg ggaagttaat gtccaggccg cggatgccac 28440
E--> 1403 ctgcgccacg tgcgacgtcg cgtccctgt tgtcgcgacg gtcgtcgtag tcgtcgtcgc 28500
E--> 1404 gtcgcccgcg acggcgga tcatgtccg ggtgatcggt gttgtatctc ctgttacggc 28560
E--> 1405 ctctgcgcct gtcttgggcg ccacgatcat cgcggccgct gcggcgccctg tcgcggcggt 28620
E--> 1406 cctcgccatg gcgtcggtca ccatcacgat caatggcatc ccggactgtt ctgcttctt 28680
E--> 1407 ggtcgcgggc ctcccggttg agagtaacgt cattgtctc cagccttcc gcgtggcgt 28740
E--> 1408 ggcggaaggt gtaggtccgc ggcggcgggc gatggtgagg gaaatcttca aagaggcgcg 28800
E--> 1409 gcagaggcgc tcaccgtcca gaacgcccac gtgccatggc ggcagagtgc gtgtcgccgg 28860
E--> 1410 cctgcaggac ttctgtattg ggaggtcgac ggcgcgcgcg gtgtaatcgt ggatctctt 28920
E--> 1411 gatatggaag aggactagat gcttgacccc cttttgccag tgctccggcg gcgtctccga 28980
E--> 1412 aatcgtgatc gatgtgctga gatgcaccat tgcacaatat atggtgcaag ttaaacagta 29040
E--> 1413 atgtgggatg caattagctt ctattatgac atgcatgtgt ttaccaaagc tgaaatttgc 29100
E--> 1414 atgttctctc agttgtccac acttcttgcg aaggaggaa gtatctatta agattcggca 29160
E--> 1415 agatacattt gataatgaag tggcaatagg tacatggttt caaccaagg tcccatgggt 29220
E--> 1416 aattctcaac acactcactg tttcttctta attattcgac aagcaagtta gatccgacag 29280
E--> 1417 aaaaaattaa aacatatcca gacaaaaaaa acttcgggtc ttgacaactc cctccgttct 29340
E--> 1418 atactcctgt ttatggtttc gcttgctatg tatttttata aacttgagga acttaataa 29400
E--> 1419 gtttgactaa gaaaaaaat aaagtatgaa ataagatgat tatgttacct aaaaatata 29460
E--> 1420 tcgatctaac tatgaaacta ataggagaga cataacatac ttaaaatgca tatttgatcc 29520
E--> 1421 gacgcgctgg cgacgggggg gcgaaaaacc tagcgccgccc cgcctttccc ctccccctcc 29580
E--> 1422 cccacctcgc cgccgcggga gctcaccgcc ggaaagtcgg cgggcgagct atgatggcgg 29640
E--> 1423 cggcggggct attctctgtg gcggcgccct ctctcaggcg cgggagaggc agcgaacggt 29700
E--> 1424 ggcgtctggg gagtggcggc ggcgagccat ctccgagagg aggcggcgga tccggcgctg 29760
E--> 1425 ccttcgccgg atctggccat cccctagctg gatccagcca gagcgcgggc gggccggcga 29820
E--> 1426 cgaggtggca tcggtgcgga gcggcgagggt gtgaggatgg cgcggcgggc cgacaagggt 29880
E--> 1427 gacggcgacg gcagaggacg gtgcgacgag gcgtgctgcc ttcgctggat ctggccatcc 29940
E--> 1428 ctagctggat ctggccggtg acggctcctt gtggtgcgga ggcgtcacgg cgtgagaagg 30000
E--> 1429 cggcggtgct ggcggtggag gccgccgcgg cgcggcaagg tgcgcgacgc cggcgcgagt 30060
E--> 1430 aggtggccga ggtccgggaa ctgccaatgg cgggtggggag cccctgggtg ccgacagcga 30120
E--> 1431 tggacaggag gcgcgctgcc tggcagcggg gtgcatcggt ggatgggtca gccttggccg 30180
E--> 1432 gtgactaagg ttgaccggc cgatgggctc agtggcgggc aggtatttgc aggtggagga 30240
E--> 1433 tggatgcgac gatgatgca ctagcggtt gttgacacgg gtagccggtc gaggcggcga 30300
E--> 1434 cgatggtcac gtcataaagg ggtgttgaag cctacggcga tcttccctcc aggtgtttgc 30360
E--> 1435 ccttttgccg tggcggttg ccgccacaag atggccacgc tggacggggc agtgcggggg 30420
E--> 1436 cgcagggggg aggggatcca ttcttctctc tccccctc caccccaac ccaaccagt 30480
E--> 1437 ggtggaggtt gaagcgcgcc gaagcagaa actccactt gatggtcggc cggcagcgag 30540
E--> 1438 gcggcgaggt ggttgcgctg cgaaggggat tagctgggtg taccgttgaa cctgacatgt 30600
E--> 1439 acgctttagt gcaggagagt aggaattagg gcgaaagcct agattccggg ccagcaatgg 30660
E--> 1440 tgacatctgt ggggtgccgt tcccccttg ggccttgcta cgtttcttcc cctttcccaa 30720

```

numbers
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1441 tgggttcttt aggtgaaaac cacttctctg agatccagga cgggcgacgg cgacgcactt 30780
E--> 1442 ggcgtcgttc cttccttgga ggcgtcgttc ataagaccca ttccttacgg gtgttttgtg 30840
E--> 1443 cttgttttgt tctaacagta ggatcagacg tagacgcgtg gtgtggctgt attttatttt 30900
E--> 1444 ttttggtat agtcttccag ggctatagac ttgtattttt ttttctgctc tatcaataga 30960
E--> 1445 aacgtcgcac tgtcgggttg tttaaaaaaa atgcatattt gatcagacca tatgatctga 31020
E--> 1446 tacgtaaaac aaactaatga ttataggttt ttatttcgac gatacagtac ctgaaaaaac 31080
E--> 1447 aaaacaagaa gatggcttgc cacaggagca aacacagact gaaactcatc aagctagcta 31140
E--> 1448 aatcccgaat cagaaaatta ggcctgtggc gccacgccag catcagaaag ccagcggaca 31200
E--> 1449 ccgtcatcgc cgggaacgac accagcagcg ccaatgtcat gcgcgcccgc cggcgacgcg 31260
E--> 1450 ccgccgcgc gcgcgcgac gtgtctcgcc tgatccgccg tcggcagcag cttcgtcatg 31320
E--> 1451 cgtgttgcgt cgatgcctga aacagattac gaataataaa ttatcgaatt atgaagtga 31380
E--> 1452 tcgaagtaat taaccggcga atcacaaatt aatttcgcgt gtacatgctc tgctctggtc 31440
E--> 1453 cgaagtctcg cttgccatgc tgcccagcc gctctgcaag atcgaagtat tgatcacgtt 31500
E--> 1454 attagatgat gaaatctgtt catttggtcat attagacgag tacatatata tgcatgtatg 31560
E--> 1455 cgcaattgta tacggtatct tcaaaaaaaaa aaaaacgtct acgatctggc gcatccaaga 31620
E--> 1456 aatatactcc ttgcctttaa cagatgtgta ccgataaggc gataagtga tcttgcctc 31680
E--> 1457 ctcaagcagt caagctaaat acctgccaaa ctctttttct ttttgccaaa ctcttaatta 31740
E--> 1458 cagtccaaag tactcaagag ttaaggctgc attacgaatt gattctcgga ttggctactc 31800
E--> 1459 cctcacctat cgggaagcaca taatccgaac tgctaaagga tataattttt aaatagtttt 31860
E--> 1460 tatataaaag ttacttaaaa attaaataaa tctattttta agtttgtagt aattaagttt 31920
E--> 1461 cgggtgtcac tgaaaatatg gttttcgaat acgctccctt tgggtctaagt gggtttgaag 31980
E--> 1462 tttattctct cggaggatca tatgtggtct ttagctgggg ttgccgcttt tggggatttc 32040
E--> 1463 tagagagtgt aacgtggctc tgtcccttct cacttcccac tgtagaagt tgctgttagc 32100
E--> 1464 cgccgtagta gtttttttcc ctaagcttca gtttctgttt tgctttttct ctattccctt 32160
E--> 1465 ggaataagcc ggtctggagg attgtattgt gtaacaaaaa ctcttttctt tttcttttaa 32220
E--> 1466 tatattggcg tgcaatcctt ttgtgcattt aaaaaaaaaa gatccgacaa gcagatttaa 32280
E--> 1467 acgaagcctt attatatggt aattcaccaa acaccgagta aagtgtgcag actagaaatg 32340
E--> 1468 aaattttaat atcaaaacat tattttttaa gattttgttt tttgggggga gggggtgtgt 32400
E--> 1469 gggtttcatc ctacgctatt tttcaacatt gcttttttaa atatgatata acacagatat 32460
E--> 1470 aaaattttac tcgtaatttt tcttttagtta cttcgttgct tttttcatgg cttatcaacc 32520
E--> 1471 atagctcaaa tgatgggaga gaaagcatac tccatttcca aaccattata acaaaactta 32580
E--> 1472 gtaatgagag gaaaaatatt gaatgaagga agtgtccat taattaaaaa aaaagtattg 32640
E--> 1473 acagggtggc ctccataggg agtaccacca tagaagtatt gaatgaagga gaagttacac 32700
E--> 1474 tacaagcatt gcaggataaa atttgttgat ttttgaaacc aggggtggtat tcataattaa 32760
E--> 1475 taaggatatat agtcaaggaa actttttcct tgatttgcta aggtaggcta ggcccaacta 32820
E--> 1476 gctcacttgg gccagtttaa ccaggcaggt tgttattgtc cacaagtcca ccaaactgat 32880
E--> 1477 cgtgtatcct ctcagattgc tgctgctgcc tccagcaatc aacaactcca gatcaaatcc 32940
E--> 1478 ttcagaaaatt acaggcagga gagaagtgtt ctgtatcaaa ttctgggtca acttcttcac 33000
E--> 1479 attctaaaaa tctcaaaaaa aaaaaaaaca gagagcatcc cactcaagca gagagagacg 33060
E--> 1480 tgcttgccaa acgaatgtca cttcccactt ctctgctag ttgcaggta gcacgtccta 33120
E--> 1481 cctcagggct atccacccat aaaaatcacc tttcatcaa cggttgcacg atcacaatc 33180
E--> 1482 cgcaatagac cttgagaatt aaggcaagtc aacaacccta ccagaggttc ttggaaagtg 33240
E--> 1483 catgataccg tctcttgaag cttttacaca gaaaattttg gtactactga aaccgtcctt 33300
E--> 1484 tttttgaaaa aagtataatt gaaggctgaa aggttcatga agtatgaact gacggtttca 33360
E--> 1485 tagttattac cctgattttt ggtctgaaac ctcggaactg tattagtcaa 33420
E--> 1486 aactcaccaa agacaaacct gagctagtat gaaagaagtt cagacttcta gaagcagcat 33480
E--> 1487 gttgctgctt tgagaaagac agatatctgt ctaattcagt ttagtaccat tcgctcggtt 33540
E--> 1488 ggtcagaaac gttagtagca gtcagtggaa aaaacattgg tgttatgggt tttccactga 33600
E--> 1489 ccagattagt tggagcgtgt tgttctgaac tttctgcaaa tggacacgaa attgcctgca 33660

```

numbers
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1490 attggtaggc acggcaagga aatttctctg cacaaggtct ctgtaggggtt agttctgaag 33720
E--> 1491 aaacaacgga cttgaatagc tgatatcttg gaagaattgg gtaccatata aaattatcaa 33780
E--> 1492 tcacaacttc tatattgcaa atagtaggac aggaaagaag actgaacaag gagttcatca 33840
E--> 1493 acacggctcg tcctgcaaat gcattttcag gaggccgaac tacgaagaga ctgtttcata 33900
E--> 1494 tttaacaatgt acgtatgatt cacttggttac agcatgccat gcgttgaggat gtacatcaca 33960
E--> 1495 aagcagaact aagacaaaaa attttctctag aagaaaatca ctaaaaaaaa atctgtgtat 34020
E--> 1496 ctgtatacgt gtatcttctc acaatgtcag actcagacac tacactgctt tgtttgatgg 34080
E--> 1497 ccccttttta acctgacctg cataatggat taagcaaagt attattttca gtaaataaat 34140
E--> 1498 tgatcgacta atccatcttt atgatgctga ttaggataag caaacttttt aaggctgtga 34200
E--> 1499 attattcctt ttgcctaaa atattcgggtg cattgcagct tagtaattga ttctcatcg 34260
E--> 1500 ttctcaccga aagcagaagg caacatgtcg atgtgatata cccagagaga aatgcctgga 34320
E--> 1501 ttattctcga gaatcgcgct ttcggcttgc acgaatctca aggcactcag attatacatg 34380
E--> 1502 atcatggctg attggctgtc actatgccc aattgattgt tgcaatttca gttttttttt 34440
E--> 1503 tttcaaatga ggcgtgtatc gtgatcgaaa agatttcaact tttgaagcga agagagaggg 34500
E--> 1504 gaagggtgct caccgcctcg acgtcgatcc ggtagacgag caggcggcgg cgctcgcggc 34560
E--> 1505 agctgggtgcg gtacgcgacg gcgaggtgcg cggcggcgag cgcaaccgac agcaggagca 34620
E--> 1506 tgggctccgg gcccttcccc tccggtgccg gcgcgacgcc gcggcgcggg agcacggcgg 34680
E--> 1507 cggcggcctt ggccagcacg taggacaccg acccgcgcgc gctcgtcgcc accaccaca 34740
E--> 1508 ggtacgcgc gcctccgcgc ccgcacgcca tgtacgcgcc tgcgaaagag aagaaaccgt 34800
E--> 1509 cgaggtcaga gagacagaga acgaacacga ggtcgatcga acagaggtgg cgggcgtcga 34860
E--> 1510 ttgctcaccg agtatgagca gcgcgcgcgc ggcggagacg gcgaggaggc cgacgagcga 34920
E--> 1511 cgagcggaag tcgaacgccc gcgcctgcgc gacgacggcc gccacgaacg acgcgtcgtc 34980
E--> 1512 cccgcccccg ccgcgcgcca ggcgcgcgga gaggagcgcg ggccgggagg cgaggctcag 35040
E--> 1513 tatcacgacg agcaccggcg gcgcgcgac gagcagcagc gacgcgatca tggcgacgac 35100
E--> 1514 gaagaacgcc gtcttgcccc acctccacgg ccgcgcgcc accctctccc ctccctcccc 35160
E--> 1515 atgcttctgc gccatcgcca gcgccaccgg cagcagcagc agcctcttct ccgccatata 35220
E--> 1516 cctcccgccg ccagctgtgg tgggtggcgc cgtcgccgga gcgagctagc tatagagtcg 35280
E--> 1517 tgggctatgg attgcttcgc cgcgtcgagg ccgacgggtt agggggacgt ggcgcgacgc 35340
E--> 1518 gaggttgacc ttgcccctgc ccgcagctg caactccctt taatactact ccgatcgctg 35400
E--> 1519 cgaagcttcg gcgactcggt taattacggc ggtaactgct aggggaaaaa cgactcgttt 35460
E--> 1520 agttttatttt tttaggtaaa aaagggtgta atagtgtgtt ttaagtttta accgtgtggg 35520
E--> 1521 cttgcgcagt gggaacgtgg tcgaaaattc cgacgtagtt ggacccgagc cggactcgag 35580
E--> 1522 ggagaccggc aggtgagaaa ggtgaaagaa aaggggaaag gtgagatctg cttcgttcgt 35640
E--> 1523 gtaggtgaag aaattcgaaa ttcttcagggt ttttcacctg ccagaattac caaatcccaa 35700
E--> 1524 ctgtacaaga gtacaggagt agcagcagta aactttctaa aaaaaaaaag agtagcagca 35760
E--> 1525 gcagcgggag tggattttta tcgatgtcca ctggtgtttt acatgccact caaatagttt 35820
E--> 1526 tgaaaaaaat taaaaaagtt ttgggaagat gtattaacat gtgatataat acttcacaaa 35880
E--> 1527 catgcaaatt caaatcaaac tttcaaatat cgtaaaaaaa caaatttaac tctagatata 35940
E--> 1528 tgttaaactag ctgtaattta atttgttttt tcggtgtgag atacataagt tgaatttgaa 36000
E--> 1529 tttgcatatt tgtgaagcga tatatcatat gttaatacat cttcttaatt taattttttt 36060
E--> 1530 tataaccatt tatgtaacgt atagataacg aggttatata ccctcgaggg atataaatag 36120
E--> 1531 tttccccaac agcagctact agaggagagt agagtccaaa cttgggtggc cgggtggtaac 36180
E--> 1532 acatggcagg catgtgtatc tgcactctga tggccaagat ggaccacatg aatgacggcg 36240
E--> 1533 tggtagctcg gcgagacacg cgggaagggt ggcgcgaatc acatggcggc gccggcgccg 36300
E--> 1534 gcgcggccgg ggttaggaac ggtggctcgg gcgcggccag gtccggtcac cgtcttcctg 36360
E--> 1535 ggctgatgtg tcatgtgtgt gggcttcttg atatcgagc gagcagcgt catcgccat 36420
E--> 1536 gtgtacggga accgctaacc gccaatgata attaagtatc aaaattattt aagggtgtgt 36480
E--> 1537 ctattccac tatccacaaa tataagatgt ttgtaacaca tcctagtaca acgaatctag 36540
E--> 1538 acagcgaatc cgtccaaatt tgttgtacta tgatatata ctttcaacga aaaaaccata 36600

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1539 tatctgtgga cggagagagt atattgcacg ttactaactt ctactctctc ttttttttaa 36660
E--> 1540 cttgcacatt tctgaacgg ctgaattgtg tgttttctat aaaacaattc tacagaaaag 36720
E--> 1541 tttgcttgaa aaaatcatat taacacatct ttcaattttt ttactaatac ttaattaatc 36780
E--> 1542 atttgttgat gcaccgcttc atttttagatg tatgagggaa ggggtttacta gagtatctcc 36840
E--> 1543 ttcaggttct caaatataag atctattttg cttcattagg acaacacttt acaccagaat 36900
E--> 1544 tgttcttcta taatattaaa gcataattgc aaatactttt aaatataagt ataataaaat 36960
E--> 1545 taattttgtg tcaagaatta ttttttccta agagtaaag ttagttaaac cttccatact 37020
E--> 1546 aatatttttag agcagagggg gtgtataatt tgattgatca agtagttgta gtgttcaata 37080
E--> 1547 tatttcgttc ttaaaagtag ttgtagactt gtagtgttca agtaggctgt tgggtggggac 37140
E--> 1548 cacctccaaa gctgacgaat tgatggaaga aaagaaaaat gaaatactaa tatgcatggt 37200
E--> 1549 gtctttgttc cgcactctgat tgagggtttt aattgatgaa ctcttctagt agatgacgat 37260
E--> 1550 ttgcagttag cagttgcact tggatttggg ttcggatatg tgcattgtca aaatatataa 37320
E--> 1551 ctaaatgctg ctagtgtgt tcttaggcca gcagtttggg ttggcttcac aagggaagtg 37380
E--> 1552 agcatattga tagagctgtc gcatggacaa tacagacgac gttttcatgc gcataaatta 37440
E--> 1553 tcattgtcca tcttggttaag tacacagacc actgtggatt gtatatgggtc agtacatgta 37500
E--> 1554 ctttcacgcc atatggccat ctcggtatag cttcaattcg atgttaatta cacaagcaaa 37560
E--> 1555 tctagattag ccaacaaagt gtggcttaat taacttgctt gtacacaccc tgctcagttt 37620
E--> 1556 ttgtaatgtg aaccaggacc ccatcagtga ggaatattat tcttcaatt atccctatac 37680
E--> 1557 tacagtctac agctataata actagctatc actattaccg gactttgttg tacttacgtg 37740
E--> 1558 ttgcattca gacgcatttt ttttctttta atcagccagc ataataatat atcaatttta 37800
E--> 1559 ttaattagag ccgaaaaacg ttttaaaaaa gacacaaata ttaggggaatg acctaatatc 37860
E--> 1560 aaataattag aaggggtgag acttcgatcc caagccgtct agcccactac cttgtggagc 37920
E--> 1561 tagccggaaa actcctgggc atttctcgcc caaaaacggt tataacccca atggtgaaaa 37980
E--> 1562 aggagctata tattccattc agacgctact gaaaatgaag tgtgcagttg tgatggacaa 38040
E--> 1563 gattattttt gcaaacgaca gcatgtttcg acacatctga ggcgttcaat ttcttgtctg 38100
E--> 1564 gtgccggtca gcagttgcag gttaggttga gattttcagg aagcagacaa ggcgctggcc 38160
E--> 1565 cacgttgtgt tcatctatga gctcacaagt tagccgccat ttggaacgag ggtgcatgca 38220
E--> 1566 ttttttttaa ttttattttt gttagttttg aaagaacagg tgcacgaata atataattca 38280
E--> 1567 ttggccgata ctaatcatgt gacaacttgg ggaaaaacaa ataattgcac tcaattgaaa 38340
E--> 1568 cttgggtgtg aagactttct agtactagtt catttttttc ctttgagggt aagcattata 38400
E--> 1569 tcccatctat atctttctta tttttttctg caagctgctc tatgatcgat catatggact 38460
E--> 1570 gggtagatgt ttgcatctag cccaactggg ttggagttat atactacct catatcaaaa 38520
E--> 1571 tatagcaatt tttagttatg aagtgtccag attcatagct aaaaattgct atattttggg 38580
E--> 1572 atggaggtag tactttgcat tttcgtccat cgatttttaga gtacacatac atacgcattt 38640
E--> 1573 agtacgtgta tgcgttttag gatgagccga tgaggccttt gcatagtaga tctctgtcaa 38700
E--> 1574 ttttcaaaca ttgtgttgat ttgtaaatga tgaatcgtgt tctcgtagtt ggaagtattt 38760
E--> 1575 agcatgtttg gttacattag ttctgttgat tttatgaatt atggatgaat atacatgtta 38820
E--> 1576 atttttcatg acaatgcttt aaaactcctt ttcaactcca caatatttaa ttcattttcc 38880
E--> 1577 caactcacct ccctcgtttt ccgcgcgcac acttttcaaa ctactaaacg gtgcgttttt 38940
E--> 1578 tgcaaaaata ttctatgtaa aagttgcttt aaaaaatcat attaattccat ttttcaaat 39000
E--> 1579 tatttttagct aatacttgat taattatgag ataaacgctg ctttgttttg cgtgggagtg 39060
E--> 1580 tctcactcc cgaacacacc ctaaaccagg cctaggtttg atttcaacgg ggaaaagggc 39120
E--> 1581 gagcaaaaac agatggtgat cgaggctact actcaaacta ttccacgacg cgcattgcac 39180
E--> 1582 ggacgtactc ttcccagcaa agacttgggt atggttagtc atgcccctat tctctgccc 39240
E--> 1583 tacttctgac gtttcttaa cgcgaattaa gctaccaata atcgaagctt ccaccaaac 39300
E--> 1584 ttttttttcc caacgacgac cttgatcttg gaacttttgg ctgatgacca gtccgtcaaa 39360
E--> 1585 catcccggcc agcttaatta gctgccgatg ttgacgggca ccgtggcgag agagacttaa 39420
E--> 1586 gcagcaacgg ccattgtttg tacgcgcttg cgttcgatcg gcagtgcaag agccaccaag 39480
E--> 1587 atcgaatagc ccatcgccgg cgagcgacgg agatggcggc gtcgcaggcg tacctcgaca 39540

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1588 aggcgcagct ccggcagagc taccgcaacg tctggcacac cgacctcacc aacgccatca 39600
E--> 1589 cggccgactt cacatgtgag cattcgtcat ccctgtgcaa aatgatagtg ctagttttct 39660
E--> 1590 gatgattttt gggagtcgat ctaattttct ctatcttttt tttccctgca ggctgctgct 39720
E--> 1591 tgtctctgtg gtggtgagtt tgttcatcta ggtttctgaa tctcttcatg gctgcacga 39780
E--> 1592 tcttcagctt aggaatattg ctaagtctga catgtttctt atctgatcca tttctcctta 39840
E--> 1593 tccagcggac catgtgtgtc ttacatgctg cgcaaacgtg cgctctacaa tgacatgtcg 39900
E--> 1594 aggtaaaattt gctctttttt caccatatgt ttgttcatgc gaaagggcat gtagcttagt 39960
E--> 1595 ggttgcggta atctgaatag taccccaagg ttctaagttt aaatctctat atgagcgaat 40020
E--> 1596 ttcaaattgg gtttgagggg ctaagttttt aatttgaaag gctacatata ttcgattgga 40080
E--> 1597 catagagacc gggtaaaaaat tacccttctc tagaaaaaat aaatatgttt gttcatcgtg 40140
E--> 1598 catagttaac tagcagtgcg gttctctgtt ctttaagtcct tttcacgcgc gtgtgtgtgt 40200
E--> 1599 ttcagatatg tgtgctgtgc tgggtacatg ccatgcagcg ggagatgcgg cgagagcaac 40260
E--> 1600 tgccccgaag tgtgccttgc aaccgaggtg gccatctgcg tactgtagcc acccgagctg 40320
E--> 1601 aatcagttcg atgatctaca tgatcttgac atgtaagtga ttcaagctga accgattcag 40380
E--> 1602 ctgatgaaac tgtatttgtt tcagggtgtt tgctgctttg gtaactcggg ggcttcaacc 40440
E--> 1603 aggttctctg tgcaagatga gttcaacatt cagacaaccc agtgcgacaa ctgcatcatt 40500
E--> 1604 gtactatcac tcccctcttg ttcattccgac tcttccaggg gcgtagccag ctaggtggca 40560
E--> 1605 ccgtgggtcca cggaccacct aaaaatttga aattatagta tatgtgctag ttaatatagt 40620
E--> 1606 aaaaattgta tagtggatca cccttttaat tgatatatta catatagatg gaccactttt 40680
E--> 1607 actttaaatc ctagctaaga cactggactc ttctcgaccc gatttgtttc agactgcgat 40740
E--> 1608 taaacacagc tgtcttggtt ctttagggct tcatgttttg tctccaacaa ttcgcctgca 40800
E--> 1609 tctgttcgct ggtcgcttgc atcgttggca gcgaagaact ttccgaggcc tcgcagttga 40860
E--> 1610 tttcctgcat atctaacatg gtctactgga cgtaaggctc tcaactcaag tattcatcct 40920
E--> 1611 tctgaaatct gatttctttt tttccaatta ccagtatttc tgatgttatc tgttgcaatg 40980
E--> 1612 tgcaggggtt gctcttgat gcaggtaatg gcacattttt ttttttactt tcctcctgaa 41040
E--> 1613 taatctcact gctttaaatt cctgatatct tatgatgaaa ctgcaaaatg taaattcaga 41100
E--> 1614 cacagcacia ggtcgagatg gacaagaggg acggcaagtt tggacctatg acagtgcctc 41160
E--> 1615 caatgcagca gatgtctcgc atcgatcaac cggttccgcc ttatgttggg tatgcgccac 41220
E--> 1616 aggcacagcc agcatactac aggtagcctg atgttggtta tccaagagtt caacatacag 41280
E--> 1617 atcatgcatg ctcaagattt tctgtagcaa agtgaaggat ggtgatcaag tagatacata 41340
E--> 1618 gtgtttgtga gaatgtgaag tgtctctagt ttctttaggt gatttagatg tttcagattg 41400
E--> 1619 gtattgaaat tgcgattttt atgtgggaat ggtgtgggtt cttacctctc tgttctgaa 41460
E--> 1620 acattcttgt gtgaataaaa ttgggggcat tggatgggtt tgtattcctc caaaaagaaa 41520
E--> 1621 tcgatggact ttattactat ctaccttact ttttcaagtc tgatatgttg caaaaaataa 41580
E--> 1622 agaaggcgtc catcttgacc tgtagtttgc agcaaatgct gaagtattgg gatgtaatgc 41640
E--> 1623 aacctgtcat agtcacctca atgttgtggc cttacagaag tctcatgaga ggggttagtg 41700
E--> 1624 gttgcagtga tctgagtagc accctaaagt tctgagttta aatcttcata gaattgaatt 41760
E--> 1625 tcaaattggg ttatttgaag gctaagttct atattcgata ggctaagttc ctaatttaaa 41820
E--> 1626 aaggctacat atatccgggt gtatatatag acaggtaaaa atacccttct aaaaaaacag 41880
E--> 1627 aagtctcatg aagaaaacaa aataaaacca aaccttttct gagttcagat gatctagacc 41940
E--> 1628 gtccatctat agatatcggg ccggtgaacg ggtgatgaac atgttgaact tcagttatat 42000
E--> 1629 ttttttaaaa tatattttta tattactgaa acattttata tttctgcaat gaggtagtag 42060
E--> 1630 agattaacac cagtggacca tttatcagca ctgaatattt taacaaaccc aaatctgttt 42120
E--> 1631 acctttttcc aaaaacaata aaataagttt gggggggacc ttatcggctg gcatgttcat 42180
E--> 1632 tgtattgaaa tgctgaatta taccacattc tccacaatct gaattgaaca aggacactac 42240
E--> 1633 tagtaacaaa ttgggatcac aagacaaaga cacattctta cacccaatct gccgtaccgg 42300
E--> 1634 caaaatggat agaaaaacag agtacagctc ggctccttgc ccgcacgtat gtacgctccg 42360
E--> 1635 gtacatgatt gtgataagcc ctctactaaa caatctccac gattcgcagt gtgtgcaggc 42420
E--> 1636 acgtcgtccg gcgaagttgt gcgccgtgtt attctaatat tctccaacta atcatcactc 42480

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1637 tgattgattg attggtcaat cccgatgctca ctataaattc cagtgggttgc atgcttttttc 42540
E--> 1638 ttcatcagag ctcggcaatt cagcctagtg tgggtggtgca gaagaccacg agcaggacaa 42600
E--> 1640 gatcgggtgca atggcgggcgg cttcatcgac gacggcgacg acggccatcc tggcggcagt 42660
E--> 1641 gatcatctct ctcgccggcg ctgccaccac cgtgggacgcc aagttcaggg cgatgcagtg 42720
E--> 1642 gactccccgcc caccgccacgt tctacggcga cgagacggcg tcggagacga tgggtacgta 42780
E--> 1643 cactcgctcgg attattttgcc ccacgcctta aaatacattt tttgtaaaaa aaaaatcttg 42840
E--> 1644 ctttaagcta ctctcttcgt tataaattat aaatcgtttt gactttgatc aaattaaatt 42900
E--> 1645 gcttcaaatt taaccaagtt tataaaaaaa ataacatatt caacactaga taaatctatc 42960
E--> 1646 ataaaaatat attcaattat aaattcaatg taactaattt gatgttgag atgttataaa 43020
E--> 1647 tttacaatag ttttaactttg accaaaatca aaacgatttg taatacagaa tgaatgtaat 43080
E--> 1648 atttgttaaa ttttcatagg gatgagtcca tgcgtgttct agaaacaata atttatataa 43140
E--> 1649 ataatacatgt aataagtaca ttagtgtaat aatctgtacc aaattgggtt gtggcagggtg 43200
E--> 1650 gggcggtgcgg gtacggcaac ctgtacgcga gcgggtacgg gacggacacg gcggcgctga 43260
E--> 1651 gcacgacgct gtccaaggac ggctacgggt gcgggacgtg ctaccagatg cgggtgcgtg 43320
E--> 1652 ggacggcgct ctgctacagg ggctcgccgg cgatcacctg gacggcgacc aacctgtgcc 43380
E--> 1653 cgcccaactg ggcggaggac cccgaccgcg gcggcgggcg ctggtgcaac ccgccgccc 43440
E--> 1654 cgcaactttg cctctccaag ccggcggttca tgcggatggc cgactggcgc gccggcatcg 43500
E--> 1655 tccccgtcat gtaccgcccg gtgcccgtgc cccgcgcccg cggcctgcgg ttcgcgctgc 43560
E--> 1656 aggggaaccc gtactggctg ctggcctacg tcatgaacgt cgcggcgccc ggcgacgtcg 43620
E--> 1657 gggacatgtg ggtgaaggcc ggcgcgggcg ggggttgggt gcggatgagc cacaactggg 43680
E--> 1658 gcgcgtcgtg ccaggcgctt gcgcagctcg gcggccaggc gctcagcttc aaggtcacct 43740
E--> 1659 cctacaccac cggccagacc atcctggccg ccggcgctac gccggcgagc tgggtgcttcg 43800
E--> 1660 ggctcacgta ccaggccccg gtgaacttct cctagatcgt ttttttagta gcagcaagca 43860
E--> 1661 gcgaggagaa ctcactcttg ataagtgaga atgctcggct ctgctgctct cttctatcgt 43920
E--> 1662 ctgctctgtc gctgtatcgt agttactccc gttgccccca tccacaacat caacatggtc 43980
E--> 1663 atgtggaaca gcggggtttg acgacaacat tgatgatgta ctccaatatt gccatattgg 44040
E--> 1664 aatgtaaaat acattgtgat gatgcaagca aggcaaaaaa atttgccgag ttatttggttg 44100
E--> 1665 tgataggcca cctaataccc aattgtagca aagctaccat atacaacaaa aaaaaaagac 44160
E--> 1666 atgtgctgca acttccagca tcctcggtat aaccaagaaa acttcaccac atttcatgca 44220
E--> 1667 aaaacaacgc aattatgggt tggattagat acactaacgc tttataaatg gaattatgga 44280
E--> 1668 aacacgaaga aaggactcac aagcaagttg aattgcaaaa cagtacaagg caattttctc 44340
E--> 1669 ttcaagagag ttggtacgac cagggtattt gttcatttgt tatccaaatt agcatccatc 44400
E--> 1670 actcaagcgg tttcaacagt tgacaaagct atttctgttc ttcacacagc acaaatggta 44460
E--> 1671 atgacagcac aaaaagtcca caatgatatt ggacagttct tcaaacattc catttttaggt 44520
E--> 1672 tatatcccat aaaatccgat attttctggt gcaataatct gagattttgc aaactactat 44580
E--> 1673 gcggatgtgc atgatgaatc gggtagtaac tttattaggc caatgtcctc aaagcaaagc 44640
E--> 1674 aggggtactg ttggcctgaa cacgaacacg cctcttatat tctggtttgt cctgcaaagt 44700
E--> 1675 agacaaaata atgtcaatga atgacatgta atgtaagaac aaggaatgcc agaattctcat 44760
E--> 1676 ttttttttca ttccgacctg tataaaaaat tgataaccgt cagtctgtgc aggatcagca 44820
E--> 1677 ggattttggct gatcaagcaa gtccgtgatt ccaacaagga tctgctttac agtgatagca 44880
E--> 1678 ggtctccagc cctgagaaga tgcaactgta aataaattcg gtagactgga aataaataag 44940
E--> 1679 actgaagaaa cagcttgaag acttacacta tcctcattaa gaattgagag gcacactgtt 45000
E--> 1680 cctgaaggat agacatttgg gtggaaaaag ccctgtggga acttgcaact ggggtggtttg 45060
E--> 1681 ctaggatagt cctcaactga gtgaagggtg agagggtagt acccaccttc ccaatcggtc 45120
E--> 1682 tgtacaaatg tagcaataca cacaataaac ataagcaatt atgaactctg gatggaaaga 45180
E--> 1683 aacaggaaaa gcttaaaagc aaccctaata tggcggttcca tgggcagagt gaaaaataca 45240
E--> 1684 ctgtaataata catatatcaa cataaagaag caataagtat atgacaataa tacatttatt 45300
E--> 1685 gaaggaaaat tagtatttgt tagcctacta ggctgggttt tcaagagagt gattgttaca 45360
E--> 1686 taacaataga agttgagcag cagcatgctg aactaataca caagatcacc aggggcgcac 45420

```

numbers
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1687 ccaggccccg gcaccttagg ccacaacctg gggcctggcc caactagcaa tggatcccc 45480
E--> 1688 cattgggttac agcttagaaa ttttggtca caaaggtttg gcccagggcc cgtcaggcta 45540
E--> 1689 gcatctattg cccaatacta tttattgtct aaccctaact tccccctgct accactacaa 45600
E--> 1690 cgctatgcgc tcgtgggaga tgcgcgcgacg ccgatgcgct cgtccccctcg cctccctccc 45660
E--> 1691 tgctcgctcc ctccaaggcc agccgccacc atacgtgagt ctccccgctt ccagccaccc 45720
E--> 1692 accaccctgc ccagccacct cacttccctc cctccgtcca tgtccactgc ctctcagct 45780
E--> 1693 cctctcgctg gctcggcgcc ccggcaacaa ggctctttct gcacaacccc cctgcacggg 45840
E--> 1694 gcgcctgcgg caagcggcag gtgctcagag tctcagacct ccactctgtc gggcaaggag 45900
E--> 1695 cggacgagga ccttgacagg tgagtttttc ataattctatt tctggtattc ccattttctca 45960
E--> 1696 aatgcctaaa tggcctagat cacctataga tcttctgatt ccattcaatt tgttttaaac 46020
E--> 1697 ttaatagaga tagaagggtga agaggcttag cgatgaaatc tatagatgat tgatggggta 46080
E--> 1698 taaagagaag aataaagatg accagaaaca ttccaaaatt ctcccgggaa tcatctaatg 46140
E--> 1699 accagaaaca tttcaaaatt ctcccgggaa tcatctattc acttcactaa aaatacaaaa 46200
E--> 1700 tctacagtgt aaatcttgtg caattggagc gggtaaaacc attctaaatg ctttcgggtg 46260
E--> 1701 aaaaaaatc cgccattttt gttgatgagt atgatggaga tgcattcttc aaagagcaaa 46320
E--> 1702 tagctgtcat tttgagggtta gatgctgttt cttgcgttgt tgtttttttc ctttcgaaac 46380
E--> 1703 tataataatt tgtattgtac ttcttattat gtattagtgt gggcttcatt tatggtatgg 46440
E--> 1704 gatagtagca attagatttg gcctagggca tgaagaaatc ctgggtccgc cactgaagat 46500
E--> 1705 tactatatat ccccccataat gcaagataaa gtgttttgga agtgatgttg attatgaaga 46560
E--> 1706 cagtagtgat ggtgactata atccatcttt cagcaactaa atcttacaac attcagatcc 46620
E--> 1707 ttgtaccctg ttaattcaat aactgtgccc gtgactccgt gcaattgcat cgggattcat 46680
E--> 1708 gagtccgtgt gctccatgcc tgggtttacag gtggtaaagc aaagcacgca ggcaactgtg 46740
E--> 1709 caaacctcta gtgatggaaa agaactattt gatagcgtga acctagaacg tttgaaggca 46800
E--> 1710 actcatgcta caaaatcacg taattaacac tcaaacaaca gagaaaactc ctcccagctg 46860
E--> 1711 tccagaaata aaagggtacta ctagatcaat tgatgataac actaaaattc taaaaaaaaa 46920
E--> 1712 aatcatacta agatctgtaa gaccctagca aatccccact gcaaatcaac acgatccatc 46980
E--> 1713 aataaaaact tcattcaaac cctccaacca acataactac tcataattct cccacagggt 47040
E--> 1714 atagagattc cagtgcagat accaatccaa tctacaaatc tcccccccc cccctcccaa 47100
E--> 1715 acctaccaac agaacagcgc ggcaaaaacc taaattctcc cccacacaga ggaagcatcc 47160
E--> 1716 gattgcgtgg tcgcatcaca atccgagcac acaccagcat ccgcagcagc ataatcgaaa 47220
E--> 1717 cagatcgaaa caggaagagg ggtgggatgg ttcgccgctg gcgcctcggc tagagcagtt 47280
E--> 1718 tggttactta cccctgctt gccggggatg gtgcagtgc agatcatgag gttcgcgcgac 47340
E--> 1719 ccgtcggcca tcgtctccgg cttcgccacg aaccctgat ccagagcaag caagcaaacg 47400
E--> 1720 accaggtcag aagaaacaca atcggcggcc atagaagatg cgaaaaaat agaaaaaaa 47460
E--> 1721 tcaccgacgt gaggggtggt cttccgccag gccttgcgct cctccgcgag gcggccgcgt 47520
E--> 1722 gcgatccctc ccgacatggc ggcggcggcg ggtggttgct ggtttgggct tggtagtctc 47580
E--> 1723 tggaaaagaa gaagaagcac cgccttctct aatctctagt cgttcggtct cttgtattat 47640
E--> 1724 tatttccacg aaattcggtta atggtagcgt ggaaatcccc gtgcgcgtgg ggcccgcgtg 47700
E--> 1725 tcagaggggt aggtagataa ggggtatttta aggctatccg gattattcta tccaaaataa 47760
E--> 1726 atcttaccaa gtttttagcaa gccattgtgc taaaattttg ataggatttc ataagcatca 47820
E--> 1727 aagtgaacca gccttagtat ctggttgagg agcttttaac agttgaagct cctccataat 47880
E--> 1728 taaaagtttt ggtaagcagt atagctttct taccagatt ataattttt ttacacctgc 47940
E--> 1729 attatagtaa tttatatatt tacaatttag aatataaatt tgaagtcaaa aactgaaaag 48000
E--> 1730 ccaaagaatc tcataactat caaaataggt gtttttaaat cttaatccca agtaggcct 48060
E--> 1731 tgaaatcttg tagagggcga tattttataa gaaaggcgat attttcgtaa taaacaaatg 48120
E--> 1732 gagaatgtga ggcggggatc ttctcgctga gattgcgttt ggttttgtca tcttgcaaac 48180
E--> 1733 ggcccagtggt ggagccgaaa caaaagtagc ggaggccggg ggaattccaa gttttattat 48240
E--> 1734 tattatttta ttattttatt attaatattt tattttctg tggtgaggag catcagggtc 48300
E--> 1735 gcgtgccgaa ttacctccgc ctttttctat ctgttttgct caagttcttt ctttcgggtg 48360

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1736 caatctcatc tcgcatctgt tctgttctgc ccaaagggac gagagcctca cgaggagagg 48420
E--> 1737 aaaaaaaaaat gaagcaggga aattgggtcac tcgtgagtca aatttggctg ctcggcgtgt 48480
E--> 1738 gcatcaagcc tcactttata gagttccttt ttctgactat tgattcatta aatgaataaa 48540
E--> 1739 gagaattgat gttgggtctag aacattcagt ttcaatcctt gcacgaaaaa aagaggaaaa 48600
E--> 1740 gaaaaataaag aagaatctac agttccaaag aaaaagaacg agtacactgc aggggtgtaga 48660
E--> 1741 ctatgacgtg ggccataaatt gtcaacgata ttggggccgag tttggcccac tagaccatc 48720
E--> 1742 cgtttttctc ttgaggagat aaggcccgcg acggttctct ctctcacct cttgctcgag 48780
E--> 1743 ctcgacattg aaccctagag ctccgcattg gatcctcgtc tcgtctccgc ctctccgtcc 48840
E--> 1744 tagggttttc ttccacatca ccacgagcca ctgatgagtc ggatctgcgg cgctgtgcc 48900
E--> 1745 ctacaccacc ttctgtattat gcacttgtga tgtgtccgca ggtggaggag gaaacatcct 48960
E--> 1746 ccataacccg cagtcgcgat acgtttttat ggtgatcgtc ggaggtggtg caggacacgg 49020
E--> 1747 ggagggagga ggaggaggat ttggtgatga ggatgacagg gagtaggtt ggagatttct 49080
E--> 1748 gagtgtctcg tcggtttgtc ggtccactgt agctggcgcg ccgaacgaac catacacta 49140
E--> 1749 ggtacgtctc ttccgctata taggcttctt ccttatagtt gcttgcttat tcaataaatt 49200
E--> 1750 tttggtcgaa gaaaatattt gatatttttt ttcaaaagca tattcgttaa ttttggtcga 49260
E--> 1751 agcctatgac tcacataact aaagggtgga gaggttaatg tacgtacctt ttgagagtaa 49320
E--> 1752 ggttaatact cacgaatttt aagtccaaga ggtaagatac ctacaatttt agccaaaggt 49380
E--> 1753 tttatataac tcaccaccgc gaggtcttag aatgtgatga ccacaccaat aacctatagc 49440
E--> 1754 ccaagcgcgg ctgacaatat cattgccaat atggccgata tccccgcggg ccaccgcgg 49500
E--> 1755 ctaacgagct atacatcatg cacagcggat tccgcaacga gctccatggc ctgctgagcc 49560
E--> 1756 tctttgtagg atgtctttgt caaaatgcc aagtgcaggc cttcacccgc gctgtcagtc 49620
E--> 1757 ccatacgagcc ttttcgtgga ataggagctc gtgggcaaga gcgaagtgtc gaagcatctg 49680
E--> 1758 ctcgaggcca gggagctggt ggtgagggtg gtggggcgcg ggagtgcagt gcctggtgtg 49740
E--> 1759 gctgccagca cgtgcgagtg aagagaggag agagagagag agaggggggg agaagatgac 49800
E--> 1760 atgatgtgga agtcgctgac atgtgaatcc cactctcacc cattgaccca atgcgtcaat 49860
E--> 1761 catggtcaac ctgccacacg agtaaaaacc gcttcccaa ctattaaagg aggtggtttg 49920
E--> 1762 cattggcttt tgaagatcgg ggagacgtta caccgggttt aacagttgag ggaagcaatt 49980
E--> 1763 aagggcctgt tcagatcgat gccattttta atcatatcat tttttttggc aaagtgtcca 50040
E--> 1764 aaaaaatgcc tacgtttagt ttggtgtcaa actttggtaa ggtttatttt ggctacaatc 50100
E--> 1765 tgaaagtcct aataagaaca taaagataag ggatggaaag tagacttagg gctcgtcac 50160
E--> 1766 ttcatgtcca aaatacactt tatcatttgt tggtaaagct gaggagattg gtaatgcca 50220
E--> 1767 attttgaaaa agttaaaata aatttacaac gaaaaatatc tgtctagttt attacttac 50280
E--> 1768 taaaaattag caataccagg aaactggtta gatttatttt ggcaatgaag tgaacgaagc 50340
E--> 1769 ccttaattcg ctaatagcgc ctgtagtggc ccattcgtat gctaattgga ccactgatgg 50400
E--> 1770 gctgtcatcg agtaagtggg ccttcagaag gtcgcaatag ttccaaagct tgggccttaa 50460
E--> 1771 tgaactatgc cgatgtggga aggagatgac aaacgggctc ggggggggtc tgggcctcct 50520
E--> 1772 gctagtgccg cgtgcaagtc agcaaccatc aagccgaatg agagtgtact gggcccgtag 50580
E--> 1773 ttggggcgtt cgtagcgatc gtacggccca catcttgtga ttctacggcc atattttctg 50640
E--> 1774 gccttagtgt atgctgggtc ccgttgttct ctctctcttt tccaaagaat cattgcagta 50700
E--> 1775 cgggtggatca aaattcctcc gaacgaattc aaccctttcc aaattccaac gccaacattt 50760
E--> 1776 atttaccaaa agaacagaag tagtaaattg ttttgaagct acccacgttc gtctcacgat 50820
E--> 1777 ctttcgacga ggaaggacga ggacgattgt gacatgacgc tacagtaaca acctaatgct 50880
E--> 1778 aggaggggccc ctgcacgtca gcctgaagtg aaagaaagca cagcctcat ccagatcgat 50940
E--> 1779 cattccaact atattaccac cctttccaac ttttctcaag ttgcagctgt gggcatcatg 51000
E--> 1780 catcagtgtg catcacggtc tctttgtttg gatggtcggt tcatatcagc tgctatatat 51060
E--> 1781 acgtacgtac gtactcctac tatactgtac gcaactgcga cctgcataga 51120
E--> 1782 cagccaagct gagatatcga tccacggtct gtgaaactta ggaaagccgt tagcttctgc 51180
E--> 1783 atccatgcc aagcagtgat caatctctcg catggcttcc ataaatatcc cctccttct 51240
E--> 1784 tccaaaagga tacttactac tccctcctta attccataaa tattacgaat ttttcagttt 51300

```

number
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1785 tgaaatttat ctgcggatat aagagatttt agaatagtac tactataagg cggaataaat 51360
E--> 1786 ttacttgttag ttatatcatt aaacatgaac ttttcggggt caagagaatc ggtgtaattt 51420
E--> 1787 cacctcataa acaacctaaa actcttcata tttgtatata gaaggagtat tactagaact 51480
E--> 1788 gattataagc cgtaaatata agcttatttag caataaaatt aggtaaaact taattttata 51540
E--> 1789 tatgtgtaaat tagcgattta aatgaaaata ctacaaaata aaccattata aaagaaacat 51600
E--> 1790 cgacaccaac tctaaaatta aatagttcaa ttttaagttt aaatttggtt gtgtttatat 51660
E--> 1791 gctgaaaagc aaacgatgaa ggtaggttgg cccaacctta gaccttgca taaaaataa 51720
E--> 1792 atctaaaatt ggatgtgact taatctagta taatgaatat ggatagaagg ccaagcagat 51780
E--> 1793 acattataaa gtatatttta cacatctagt tctagatttg ttcgtttagg cggatggagt 51840
E--> 1794 agttgccggt tgaaaagttt ctgatgccct aactaggtgt gtgtttattt ggcaattcga 51900
E--> 1795 ttatatcgat caccgagtaa tggggatgta ttttgtttta ttaggattaa gattttgatc 51960
E--> 1796 aacaattatt ctattataat ataatttttg tgaagtaaaa ttaatgttat tagaccgctc 52020
E--> 1797 ttcaaaagta cttttatatt attatatttt ttgtcacata gatgatatat tagataataa 52080
E--> 1798 attttgtcct aacaaaataa aatacgtcat acatcttaaa atgggtgggag tatttgtttg 52140
E--> 1799 gattaaccgg cgtttttagg aaaccgtcct taattggcca gttgggtttgc cactcaaagg 52200
E--> 1800 aaacaaaaaa aaaaggcgag gtgaattagt aaagcctcag tggctccgc tctaatacga 52260
E--> 1801 cagctagct gctttattcg gcggccaaca tgggaagggt gatgagattc tgccgatca 52320
E--> 1802 ctgaagattg tatagttcct acaggagcta tgttgccctc gatcaccttg cttttctttc 52380
E--> 1803 agatatgtgc ttaagtttac ttttcttggt ttctttcat cttttaagca agggtaagg 52440
E--> 1804 gacatgatat acactttctc tgaggatagt ggagagagat atatatatct cggcatctt 52500
E--> 1805 caaagaaaag gtgtactggt gagagcttat gtggatctta aactcttaat tatagcaaag 52560
E--> 1806 ttattagcta ttaatatgcca aaatgcggct ttgctaaagc aaaaggagct gatgaaaaac 52620
E--> 1807 gtactagatc agctagatag ctagctaggg atatggcgca aagctgggaa caaccttatc 52680
E--> 1808 acaacgtcta ctagcttggt gtcttgata aagagaacaa attgctatgc attgctaggt 52740
E--> 1809 caccgcttgt tgagttgagt tgagtacaat atctttatac tagcttgccg tgttgcttat 52800
E--> 1810 tccattttct tccacgtag aggatctata ctggacggct tagaatccct cgtatagtct 52860
E--> 1811 cgtaccaaca gttattttctg tgtcaaaatg tcaaaagtc gagcgaaaca aaagccggca 52920
E--> 1812 tgattcagtt ttctagaacg gtaacggcgt acaatcctac ggtggcgccg tgtcatgaac 52980
E--> 1813 atacgagcat gacagtaaat attggccctg ttaatttggt gaggttgag aatctaagat 53040
E--> 1814 acagctagct gggttaagtag taaaaggtaa gaatatgagg gcttgtttag attccctgtc 53100
E--> 1815 aaaattttac accatgtcac atcgaatggt tggatacatg cataaagtat taaatataaa 53160
E--> 1816 aaaactaatt acacagatta tgtgtaaatt acgagatgaa tcttttaagc ctaattgcgc 53220
E--> 1817 catgatattg caatgtggtg ctatagtaaa catttattaa tgacagatta attaggctta 53280
E--> 1818 ataaattcgt ctgcgggttt acaggcagat tctgtaatat attttattat tagactacat 53340
E--> 1819 ttaatacttc aaatgtgtgt cattatatct gatgtgacac gccaaaactt tacactctg 53400
E--> 1820 aatctaaaca cagccagaaa aggtgagttt ttgatcattt tctgtactac tacttctgtc 53460
E--> 1821 cagaaacaca tcggagctta ggtgacgatg gatctcttta gtgacatgac tttgaccatg 53520
E--> 1822 atacaaagggt ttgaggagga caacaactac atgcatatat attatacaaa ttttcgctaa 53580
E--> 1823 tcacggatga aggtttggca ataggttggt actcgctgtc tttaggctgg tgttatagtt 53640
E--> 1824 ggtctcttgt tttccatcaa accgtgattt gtaatttaca gttgttttga ctttaagctt 53700
E--> 1825 ttgtaataat ttggtgtagt ttctttgaaa caaatgatat aatgatcttt ttaacttttt 53760
E--> 1826 cactttaatg ccattctcaa ccttctaaat ttaatttggc aatgctaaaa ttttagtaaca 53820
E--> 1827 taactggctg tgttttagttc cacaccaaaa ttgaaagttt gaagaaattg gaatgatgtg 53880
E--> 1828 acggaaaagt tgggaagttg tgtgtataga aaagttcgat atgatggaaa tgttggaggt 53940
E--> 1829 ttgaagaaaa aaattggaat ctaaacaggg ccaactataa catactatta ccaacagaa 54000
E--> 1830 cttactaaat tttggtaatt ctgaaccttt tcattcttaa attttttacc tggtaagata 54060
E--> 1831 acaaaaataa cacttttgtc cacaccttac cttaaaaaaa atggtaatgc caaaatttga 54120
E--> 1832 taagttcttt ttcttttttt tttgcaatga agtgaacaag cactttatta tctcaaaaaa 54180
E--> 1833 atataaggat gtcaagagct tgggaattgt tcaagaagat aagtatctct gtattatttt 54240

```

numbers
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1834 ctcaccta aa tcaatcacaa ccatatcttt tttttaccta ctttcttata ttaatcaatc 54300
E--> 1835 acaagtatca ctcaccttct tttaaaaaca tggccattgt tttgtagagt acataatatc 54360
E--> 1836 tcttggttgg ggacttactc ttttttatca gtattcacca caatcttgct atcttcgtct 54420
E--> 1837 taaaatatag ttatttctag catagtaact tttcccaaaa taaagctata ttttcaccca 54480
E--> 1838 ccctctcatc tcaaccaatc acaaccattc ttttcaccta ttttctcttt tcccgcta at 54540
E--> 1839 cacaactctc ctccactcat cgctacatac tttcttaata ctcggtgtct tctaaaagaa 54600
E--> 1840 attacattat gtgatggaag aagtatagaa gtggtagcat ggttaactcc ttttgtacat 54660
E--> 1841 cctactgtgt cagtttaaca ttacaattta caaggattct ctccagtagg aagggtctct 54720
E--> 1842 tacctctgta ccatgctagt caatctcaat cacctcaaag tatactcatt ccaactctga 54780
E--> 1843 aacccaagtg cgaggctact actcactggt acaacaactg tgcaaaggac aatcacgcaa 54840
E--> 1844 tagtaaaatt ttacaagaaa ccgaacaaaa gcttcaaaaag gtacgagctg cactgtcag 54900
E--> 1845 gtactaggaa aaacctttta ttagtacata agagaaaaag acacttacta taattgcatg 54960
E--> 1846 gaccacaaat ccactatctt ctaatttaag ctgcccagta caaatctcaa aagaagttat 55020
E--> 1847 tccccattgg tttttacatg ctcccatgca caagctcaac aatgcaacct agctacccaa 55080
E--> 1848 aactcagcat tcaatatctt ctttcacctt gtttatttgc atggaggagt agtagctagc 55140
E--> 1849 agtacactgc tgcttcaatg caacttattg tgttactacc aaatacagat ataaaaggac 55200
E--> 1850 atttcagatt gtgtagcgta gttcgaagcc atcagtga aa ggcacatgca gatggaatcc 55260
E--> 1851 ggggagatca ttgcaccct tgtactagga gaggttcgct agatgtgttc atcacttaac 55320
E--> 1852 aactataatt catttgtaat taaccaagta tactcgatcg agtatactcc ttctatcaca 55380
E--> 1853 aaatataagg agttttgatt atatgggaca tcctaatact acgaatttag ataattaagc 55440
E--> 1854 agtttgttca gattcgaagt gataagatgt gtcccataca actttatatt ttgaaacgga 55500
E--> 1855 gtaagtaaca aacatatata taggacgtgt catattttac atccaaaaca ataaagggat 55560
E--> 1856 gttcagagaa acatctagag gtattctggc tagctacaca acgacttggg tttaaagcct 55620
E--> 1857 caccacatct aattatttga tattagggtt tttcctaata ttcacgtctt tataaaggga 55680
E--> 1858 tgttcgactg gcttggtat ggcttttcca cgcagctact accgctacta ctagtggctg 55740
E--> 1859 caaacctcaa cagtaacagc ggacgcggct aagaaccaca aaacttaca gtgacgcata 55800
E--> 1860 tctacacttt taatgcacgc agatctccag atgatcatgt cactgttact gtactattgg 55860
E--> 1861 atccaggacc tactaaccta gctaacagat gattatgcag ggtagcataa ataacagc 55920
E--> 1862 actaatagta tttgacgcta ctccaaagtt gtcaatccac taattccaat aggagtagga 55980
E--> 1863 caaggaaaaa ttgtcacaca atgatgacat attattgact tatactaata taagatatta 56040
E--> 1864 ggagaaaaag actggaaata tcagccgacg tcggttggtta tccttggttag gcttctttt 56100
E--> 1865 gggcaaggag tgtggttatc cttttaagta attagactgt actagctact aataaccacc 56160
E--> 1866 caatatgttg aactctaata ccttgtttta tcgcaaatta aatggctatt caagagtta 56220
E--> 1867 aaacataata catcttcata ttaaccttat ggctagagac cacagaaaga gagaaatttc 56280
E--> 1868 aaagacaatg tatgaaaagt tgtgaagtga cactttccac taatagctta ccaccgtttt 56340
E--> 1869 ggggctgtaa aactaaaaag gagcacatcc agatactgac acacatgatt tcacgtgaaa 56400
E--> 1870 aacatattac cctgcgcctt ccaaagtga aaaggttaat tattttggtg ccatgttggt 56460
E--> 1871 gtacggcatg cataccgcgc ttaagcatga ataggtgagt aggaagatat gtctcatgct 56520
E--> 1872 ctgcaactgac taaatttctt tttacaaata ttcatattgc tctgtacata caagttcttt 56580
E--> 1873 atatttgaca aaatttatac actgttaagt agttaaaaac tagtttaaga taaatattgt 56640
E--> 1874 taagtttata ccgaacctat ataaaacaat ttcttaaaag gcggtaaagac gatagacctt 56700
E--> 1875 acaaaaagggt gatactacgg gtgggtttag tttcacgcca aaattaaaag ttcgattgaa 56760
E--> 1876 attggaacga tgtgacggaa agtttagaag tttgcgtgag tagaaaagtt cgatgtgact 56820
E--> 1877 tttttgggtt caaactttga atctaaaccg gacctacttc caaaaagcct agataatatg 56880
E--> 1878 catattgtag atttttaata tacagcttac gccctattat attagtttgc gtatcactta 56940
E--> 1879 cgcaaccacac gtgggtgccc ccacaaccaa ttaacctagt aaaaatagta aatatattgc 57000
E--> 1880 tgtctaccat tggatgcacg ctgttcatcg atatagacga ccatctaata tcatagtgggt 57060
E--> 1881 actaaaatta ttactagaat ataatacaat gagattagaa cgccgctaaa tcgatattga 57120
E--> 1882 aaatgccacg aaccgcacca attatagcag gcccatattat tccggcgagg ttgtctcccc 57180

```

numbering
off

RAW SEQUENCE LISTING

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:18

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

```

E--> 1883 ggtcttttgca acctgtgtgg gtcacgtgaa aactgaaagg gagtcctacg tgcgggatcc 57240
E--> 1884 ccacagggga tggcccggat gacgaggcag gcccctgacc gcggctacgt gtcgccatcg 57300
E--> 1885 cagcgggtccg tccgtacacc cgctcgtgag gcccccgac cggtcccaa cctcgtaca 57360
E--> 1886 cgcccgtggg cccacacaaa cccccgggat tggcagaaat cgtcggacca tegtctgac 57420
E--> 1887 cccacagtgg gacccaccga gctagggccc acctgtcaca gctgctcgtt cccatgctcc 57480
E--> 1888 aagttggggg ttgggttttt ttctttttgc gaacacttcc cgtttgagga ttggaggagt 57540
E--> 1889 ggggctgtcg taggcgacgg agacgggatt atggagtact acagtacacg cacagtacat 57600
E--> 1890 ttttctactgt tgctagatgc ggtacaggct acaaagggtga ataactctgt cctctctgcc 57660
E--> 1891 tttgatcca acggtctata tacgttacgt gctatactag ggatggatgg cactgtagca 57720
E--> 1892 atgctggatt aggtcttgcc actcaccact caccagggtg ggtgccgttt tgtttctcga 57780
E--> 1893 ttaggtctaca agttaacatc agatttatgg gttcaaatat agtactagtt tacatgcgat 57840
E--> 1894 ttaacagtga aattatttct caaaacaaaa ttgtagtata tgatttttgg taatgagttt 57900
E--> 1895 gtagcatgga atgatgctgt gttctgattt gcacaagaat ggcatgcgta ctatgcattg 57960
E--> 1896 caagggtcca attgtgatga tttgtacccc ttttttttgt gaaattcaga tagattgcta 58020
E--> 1897 catgctttcc tcttttggtt tctgcatata atcctggttt cttctagagg agttctaatt 58080
E--> 1898 tggttgtccc atgttgtaa taaaattatg attgtaagta caaatggcta taaaattgat 58140
E--> 1899 acggcattca caatattata ttgagatatt tctttttata taagattagc acacaacttt 58200
E--> 1900 tcattcgagt actgctctca ttgagatggc cagatactat tttctgattg aaaagtccac 58260
E--> 1901 gcccatgcat atggttttaa taaaaggca catgtgtttt cgtgagaatg tgaaatcaaa 58320
E--> 1902 gcatgtcgct attgccatga ttatcctaag atttcacgct cttgcccgca aaaactttaa 58380
E--> 1903 cgggctactc acagggaaaa tagttggcag atagccacgc tttaacgtac gattgccata 58440
E--> 1904 tatatgaaaa acaaaacaag ccatacgctt agccacttgc ttttgacata tcccactctg 58500
E--> 1905 gtgtctggac aaggatagaa acaaacccca ccaccattca tgggcccgttt gatttattta 58560
E--> 1906 tttctagcaa tggtagattc ttttattggg tcggaaaacg gatgtgagcc actcttgtgg 58620
E--> 1907 tacatgttaa cacaacttta actagttcat tttagtgtg agattagga tttttcgtg 58680
E--> 1908 gtctccgtct cttcgagtat gtgttagggg cacatccacg gttaaatcga gaggttcaat 58740
E--> 1909 ccatagaatc aataatatgt acattaggac atactccctc cgctctgcaa taaatgaatc 58800
E--> 1910 tagctaggac tgaatgtgga tgtgacacgt tctacatcca agactagctg gattggtttt 58860
E--> 1911 taatgggcga aggaagtaat aagaaccaa atggttaaag cttgaccatc aatctaagca 58920
E--> 1912 taagagcaag tataatagta ggctataagc cgggtaaagt ctgaggtgga tgagagaagc 58980
E--> 1913 gggctgtaga cttacagccg gcttgagcat aagaaccaag aaactctgtg agagagacaa 59040
E--> 1914 atgggtccta tattaattgt aaagagctaa ctattatata ggtaggctga gagaaagcta 59100
E--> 1915 caaagaacct tatagccaat aggtcggctg tattattagc cttgctctaa tgcagttgcc 59160
E--> 1916 agaaatgtcc taggcgggaa tacctggggg gcaaattggg gaattctttc ccaccaattg 59220
E--> 1917 gcgcgggtccc tctgatctct ctttcccatc aggcggaggc cagctaagcg gaaagggggc 59280
E--> 1918 acctggtggg agtgttgggg cggggcctcg cccacttgtt cctacgcccc tttccgcgcg 59340
E--> 1919 aggaggtggg acgagagacg acggcgatcc acggccaatg gcgattgccg gtctcggctg 59400
E--> 1920 gtcgcactcg cgctcgcgcg cgggcgcctc gtgggtcgcg ggtttcccag gacgggaagt 59460
E--> 1921 cgctcgcgcg gtcgccttct ttatttggct acctcctcct cctctccctt cccacccat 59520
E--> 1922 ctgcgcctcg tctcgtctcg tctctccact ccccccactc ccatccgcta ctgctagtac 59580
E--> 1923 tactactacc cggcctctcg ccttctcgcg cggccgcgat ttccgttcgc aaatccgcac 59640
E--> 1924 ccacggcggc gcgaggtcgc cgctcgtcgc gagccatttc gggtgagagg gggggtctcc 59700
E--> 1925 ggtttttctc agatctgtcc acttttgtcc agttttgatc tgggtgattta atatactatt 59760
E--> 1926 tttcacttct ggtggtttgc ggcgacgcgt gtgcaggggg gtagtttata agggcttgcg 59820
E--> 1927 cgaggagggg gaggagtagc gggtagcggc ggctcagtcg gtagtcgtcg cgctcgcggc 59880
E--> 1928 ggcggcggtc gagagagatc gggatcgatg gtgcggggga ggacggagct gaagcggatt 59940
E--> 1929 gagaaccgca cgagccggca ggtgacctc tccaagcgcc ggaatggcct cctcaagaag 60000

```

Numbers

OK

These pages
shown as a sample
of sequence 15 env

VERIFICATION SUMMARY

DATE: 01/17/2007

PATENT APPLICATION: US/10/659,755A

TIME: 12:35:19

Input Set : N:\efs\01_17_07\10659755_efs\NBLE007US.txt

Output Set: N:\CRF4\01172007\J659755A.raw

L:415 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6
L:595 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:8
L:929 M:254 E: No. of Bases conflict, LENGTH:Input:60 Counted:59 SEQ:15
M:254 Repeated in SeqNo=15
L:2693 M:252 E: No. of Seq. differs, <211> LENGTH:Input:105840 Found:105839 SEQ:15

This application file contains additional errors !

Only the first 1000 errors are shown above !